



# ***STIC Search Report***

**EIC 1700**

**STIC Database Tracking Number: 196437**

**TO: Ben Sackey  
Location: REM 5B31  
Art Unit : 1626  
July 27, 2006**

**Case Serial Number: 10/791425**

**From: Kathleen Fuller  
Location: EIC 1700  
REMSSEN 4B28  
Phone: 571/272-2505  
Kathleen.Fuller@uspto.gov**

## **Search Notes**

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ACCESS DB # 196437  
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Scientific and Technical Information Center

SEARCH REQUEST FORM

Requester's Full Name: Ben Sealey Examiner #: 73489 Date: 7/25/06  
Art Unit: 162e Phone Number: 2-0504 Serial Number: 10/791,425  
Location (Bldg/Room#): Room 5B31 (Mailbox #): \_\_\_\_\_ Results Format Preferred (circle): PAPER DISK  
\*\*\*\*\*

To ensure an efficient and quality search, please attach a copy of the cover sheet, claims, and abstract or fill out the following:

Title of Invention: Synthesis and antimicrobial activity of novel dicentric reverse <sup>amide</sup>

Inventors (please provide full names): Goykian et al.

SCIENTIFIC REFERENCE BR  
Sci & Tech Inf. Cntr.

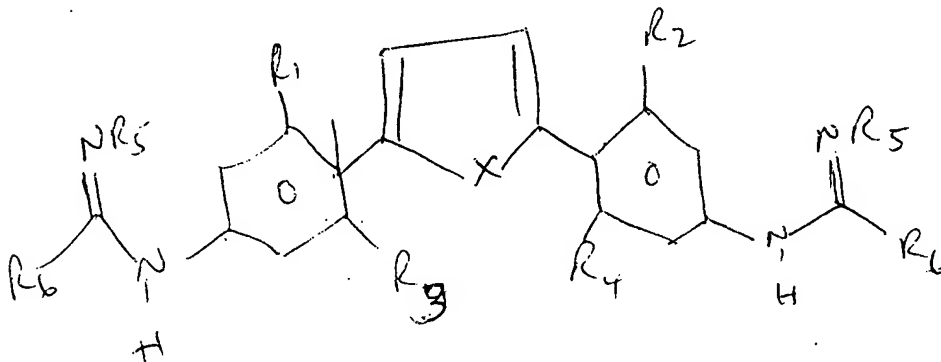
Earliest Priority Date: 11/06/00

JUL 25 2006

Search Topic:

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc., if known.

\*For Sequence Searches Only\* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.



$R^1 - R^6$  are as defined in claim 1

=> FILE REG

FILE 'REGISTRY' ENTERED AT 16:21:05 ON 27 JUL 2006  
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STRUCTURE FILE UPDATES: 26 JUL 2006 HIGHEST RN 896142-63-5  
DICTIONARY FILE UPDATES: 26 JUL 2006 HIGHEST RN 896142-63-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

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<http://www.cas.org/ONLINE/UG/regprops.html>

=> FILE HCAPLU

FILE 'HCAPLUS' ENTERED AT 16:21:09 ON 27 JUL 2006  
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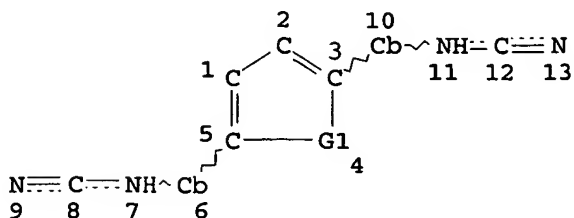
FILE COVERS 1907 - 27 Jul 2006 VOL 145 ISS 5  
FILE LAST UPDATED: 26 Jul 2006 (20060726/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

=> D QUE

L3 STR



*123 structures from query*

VAR G1=O/S/N  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RSPEC I  
 NUMBER OF NODES IS 13

STEREO ATTRIBUTES: NONE

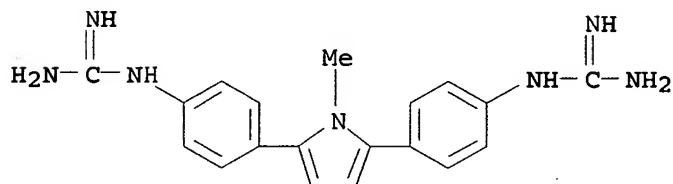
L5 123 SEA FILE=REGISTRY SSS FUL L3  
 L7 21 SEA FILE=HCAPLUS ABB=ON L5  
 L8 12 SEA FILE=HCAPLUS ABB=ON L7 (L) PREP/RL  
 L9 19 SEA FILE=HCAPLUS ABB=ON L7 AND PHARMAC?/SC,SX  
 L10 20 SEA FILE=HCAPLUS ABB=ON L8 OR L9  
 L11 1 SEA FILE=HCAPLUS ABB=ON L7 NOT L10  
 L12 21 SEA FILE=HCAPLUS ABB=ON L10 OR L11

=> D L12 BIB ABS IND HITSTR 1-21

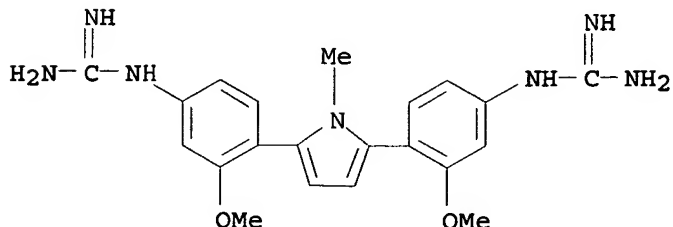
*21 CA references*

L12 ANSWER 1 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2005:1342002 HCAPLUS  
 DN 144:253958  
 TI Synthesis of some diguanidino 1-methyl-2,5-diaryl-1H-pyrroles as antifungal agents. [Erratum to document cited in CA143:266774]  
 AU Jana, Gour Hari; Jain, Sanjay; Arora, Sudershan K.; Sinha, Neelima  
 CS Medicinal Chemistry Division, Lupin Research Park, New Chemical Entity Research, Pune, Maharashtra, 411 042, India  
 SO Bioorganic & Medicinal Chemistry Letters (2006), 16(3), 751  
 CODEN: BMCLE8; ISSN: 0960-894X  
 PB Elsevier B.V.  
 DT Journal  
 LA English  
 AB The locant of guanidino and fluoro for structure 9h in Table 1 was duplicated. The correct version of Table 1 is given.  
 CC 27-10 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 1, 10  
 ST erratum pyrrolediyl bisphenylene guanidine prepn antifungal agent; diguanidino methyl aryl pyrrole prepn fungicide fluconazole erratum; Stille coupling diguanidino methyl aryl pyrrole fungal infection erratum  
 IT Fungicides  
 Mycosis  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. and study of their activity as antifungal agents (Erratum))  
 IT 863710-26-3P 863710-27-4P 863710-28-5P  
 863710-29-6P 863710-30-9P 863710-31-0P  
 863710-32-1P 863710-33-2P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL

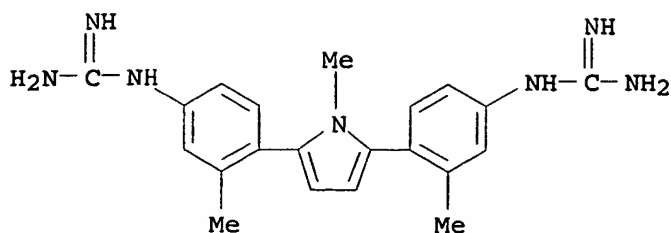
- (Biological study); **PREP (Preparation)**  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. and study of their activity as antifungal agents (Erratum))
- IT 96-54-8, 1-Methylpyrrole 1461-22-9, Tributyltin chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. using stannane derivative as synthetic intermediate (Erratum))
- IT 863710-25-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. using stannane derivative as synthetic intermediate (Erratum))
- IT 344-38-7 364-73-8 586-78-7, 1-Bromo-4-nitrobenzene 7149-70-4, 1-Bromo-2-methyl-4-nitrobenzene 29682-39-1, 1-Bromo-2-chloro-4-nitrobenzene 41513-04-6 77337-82-7, 1-Bromo-2-methoxy-4-nitrobenzene 167415-27-2  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. via Stille coupling using stannane derivative and bromonitroarene as reactants (Erratum))
- IT 863710-26-3P 863710-27-4P 863710-28-5P 863710-29-6P 863710-30-9P 863710-31-0P 863710-32-1P 863710-33-2P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); **PREP (Preparation)**  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. and study of their activity as antifungal agents (Erratum))
- RN 863710-26-3 HCAPLUS  
 CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis- (9CI) (CA INDEX NAME)



- RN 863710-27-4 HCAPLUS  
 CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(3-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

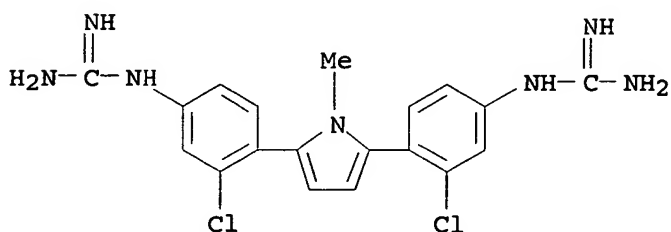


- RN 863710-28-5 HCAPLUS  
 CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



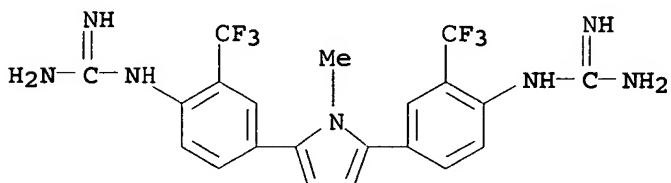
RN 863710-29-6 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



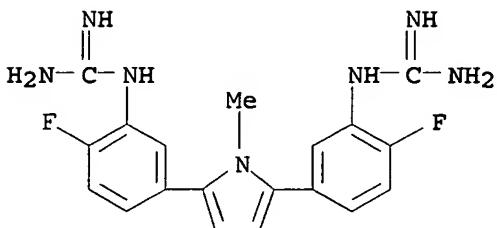
RN 863710-30-9 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis[2-(trifluoromethyl)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



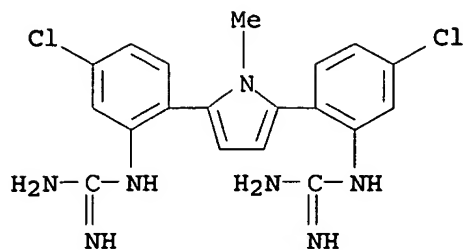
RN 863710-31-0 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(6-fluoro-3,1-phenylene)]bis- (9CI) (CA INDEX NAME)



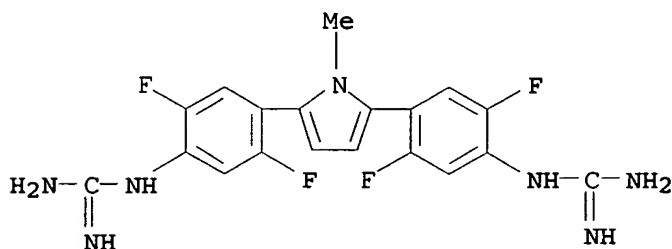
RN 863710-32-1 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(5-chloro-2,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 863710-33-2 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(2,5-difluoro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



L12 ANSWER 2 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1026859 HCAPLUS

DN 143:332486

TI Dicationic compounds for activity against trichomonas vaginalis

IN Boykin, David W.; Stephens, Chad E.; Secor, W. Evan; Crowell, Andrea L.; Kumar, Arvind

PA Georgia State University Research Foundation, Inc., USA; The Government of the United States of America As

SO PCT Int. Appl., 57 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005086754	A2	20050922	WO 2005-US7316	20050307
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				

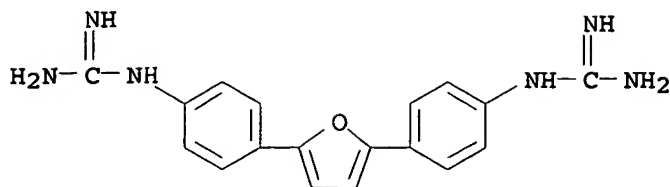
PRAI US 2004-551089P P 20040308

OS MARPAT 143:332486

AB Dicationic compds. for the treatment of T. vaginalis infections are described. The presently described compds. exhibit in vitro activity against metronidazole-sensitive and -resistant T. vaginalis isolates.

Furthermore, the presently described compds. demonstrate IC50 concns. that were not elevated in the metronidazole resistant isolate, suggesting that their activity is not affected by parasite mechanisms that confer resistance to 5-nitroimidizoles.

IC ICM A61K  
 CC 63-5 (Pharmaceuticals)  
 ST dicationic compd trichomonas parasiticide infection  
 IT Amines, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (diamines; dicationic compds. for activity against trichomonas vaginalis)  
 IT Human  
 Parasite  
 Parasiticides  
 Protozoa  
 Trichomonas vaginalis  
 (dicationic compds. for activity against trichomonas vaginalis)  
 IT Dialdehydes  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dicationic compds. for activity against trichomonas vaginalis)  
 IT Drug delivery systems  
 (liposomes; dicationic compds. for activity against trichomonas vaginalis)  
 IT Drug delivery systems  
 (oral; dicationic compds. for activity against trichomonas vaginalis)  
 IT Drug delivery systems  
 (prodrugs; dicationic compds. for activity against trichomonas vaginalis)  
 IT Infection  
 (trichomoniasis; dicationic compds. for activity against trichomonas vaginalis)  
 IT 777041-42-6  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dicationic compds. for activity against trichomonas vaginalis)  
 IT 64-17-5, Ethanol, uses  
 RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)  
 (dicationic compds. for activity against trichomonas vaginalis)  
 IT 865094-64-0  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (dicationic compds. for activity against trichomonas vaginalis)  
 IT 212829-47-5P 790241-42-8P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (dicationic compds. for activity against trichomonas vaginalis)  
 IT 66-98-8, 4,4'-Diformyl-1,1'-biphenyl 106-51-4, 1,4-Benzoquinone,  
 biological studies 68827-43-0, 4-Amidino-1,2-phenylenediamine  
 73819-26-8, 2,5-Bis(4-amidinophenyl)furan 148344-30-3 173420-56-9  
 186953-56-0 192525-52-3 212829-51-1, 2,5-Benzofurandicarboxaldehyde  
 242807-42-7 442842-45-7 500714-77-2 790241-43-9  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dicationic compds. for activity against trichomonas vaginalis)  
 IT 7647-01-0, Hydrochloric acid, biological studies  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (salt; dicationic compds. for activity against trichomonas vaginalis)  
 IT 442842-45-7  
 RL: THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
 (dicationic compds. for activity against trichomonas vaginalis)  
 RN 442842-45-7 HCAPLUS  
 CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



- L12 ANSWER 3 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN  
 AN 2005:589383 HCAPLUS  
 DN 143:266774  
 TI Synthesis of some diguanidino 1-methyl-2,5-diaryl-1H-pyrroles as antifungal agents  
 AU Jana, Gour Hari; Jain, Sanjay; Arora, Sudershan K.; Sinha, Neelima  
 CS Medicinal Chemistry Division, Lupin Research Park, New Chemical Entity Research, Maharashtra, 411 042, India  
 SO Bioorganic & Medicinal Chemistry Letters (2005), 15(15), 3592-3595  
 CODEN: BMCLE8; ISSN: 0960-894X  
 PB Elsevier B.V.  
 DT Journal  
 LA English  
 OS CASREACT 143:266774  
 AB A series of novel 2,5-bis(guanidino-aryl)-1-methyl-1H-pyrroles 9a-h has been synthesized starting from 1-methyl-1H-pyrrole. The antifungal activities of compds. were evaluated by in vitro agar diffusion and broth dilution assay against Candida spp. and Aspergillus spp. One compound from this series was found to be equipotent or more potent than fluconazole, and one compound was comparable to fluconazole against most of the tested strains.  
 CC 27-10 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 1, 10  
 ST pyrrolediyl bisphenylene guanidine prepn antifungal agent; diguanidino methyl aryl pyrrole prepn fungicide fluconazole; Stille coupling diguanidino methyl aryl pyrrole prepn fungal infection  
 IT Fungicides  
 Mycosis  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. and study of their activity as antifungal agents)  
 IT 863710-26-3P 863710-27-4P 863710-28-5P  
 863710-29-6P 863710-30-9P 863710-31-0P  
 863710-32-1P 863710-33-2P  
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. and study of their activity as antifungal agents)  
 IT 107819-90-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. and study of their activity as antifungal agents)  
 IT 96-54-8, 1-Methylpyrrole 1461-22-9, Tributyltin chloride  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. using stannane derivative as synthetic intermediate)  
 IT 863710-25-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. using

stannane derivative as synthetic intermediate)

IT 344-38-7 364-73-8 586-78-7, 1-Bromo-4-nitrobenzene 7149-70-4,  
1-Bromo-2-methyl-4-nitrobenzene 29682-39-1, 1-Bromo-2-chloro-4-  
nitrobenzene 41513-04-6 77337-82-7, 1-Bromo-2-methoxy-4-nitrobenzene  
167415-27-2

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. via Stille  
coupling using stannane derivative and bromonitroarene as reactants)

IT 863710-26-3P 863710-27-4P 863710-28-5P

863710-29-6P 863710-30-9P 863710-31-0P

863710-32-1P 863710-33-2P

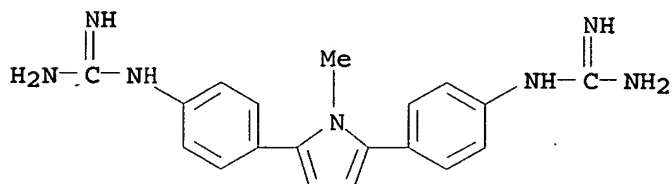
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL

(Biological study); PREP (Preparation)

(preparation of (pyrrole)diylbis(phenylene)bis[guanidine] derivs. and study  
of their activity as antifungal agents)

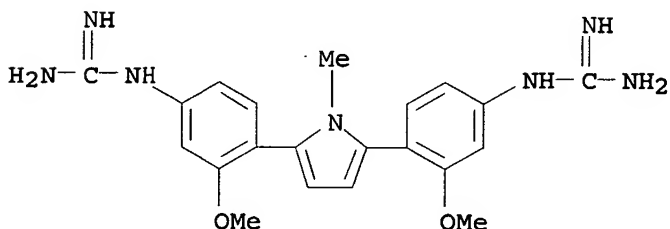
RN 863710-26-3 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis-  
(9CI) (CA INDEX NAME)



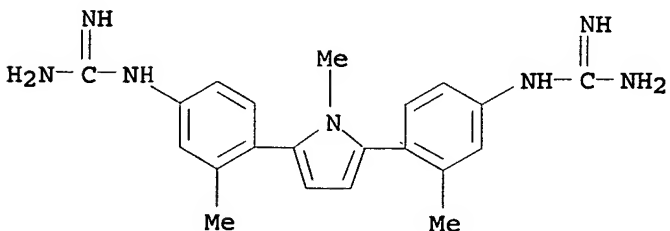
RN 863710-27-4 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(3-methoxy-4,1-  
phenylene)]bis- (9CI) (CA INDEX NAME)



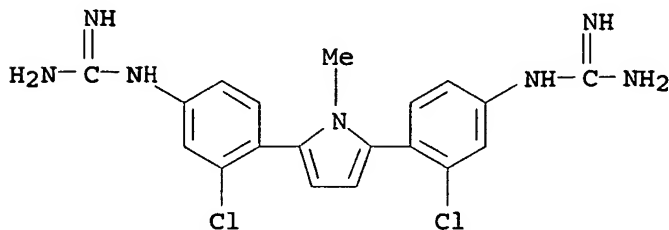
RN 863710-28-5 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(3-methyl-4,1-  
phenylene)]bis- (9CI) (CA INDEX NAME)



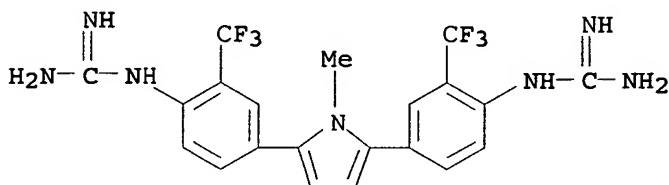
RN 863710-29-6 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



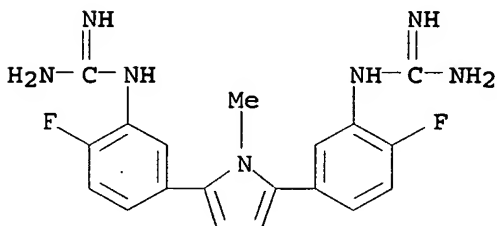
RN 863710-30-9 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis[2-(trifluoromethyl)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



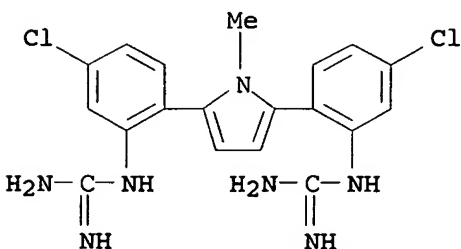
RN 863710-31-0 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(6-fluoro-3,1-phenylene)]bis- (9CI) (CA INDEX NAME)



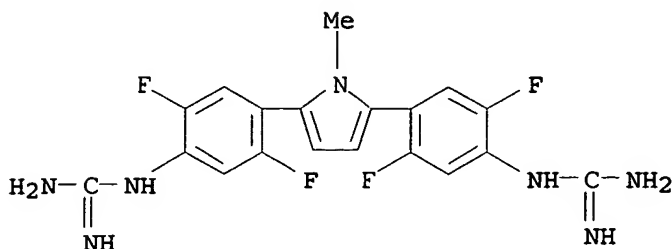
RN 863710-32-1 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(5-chloro-2,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 863710-33-2 HCAPLUS

CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)bis(2,5-difluoro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 4 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:324127 HCAPLUS

DN 142:373841

TI Preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria

IN Tidwell, Richard R.; Boykin, David; Brun, Reto; Stephens, Chad E.; Kumar, Arvind

PA University of North Carolina At Chapel Hill, USA; Georgia State University Research Foundation, Inc.

SO PCT Int. Appl., 82 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005033065	A1	20050414	WO 2003-US27963	20030905
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2537791	AA	20050414	CA 2003-2537791	20030905
	AU 2003265967	A1	20050421	AU 2003-265967	20030905
	EP 1663959	A1	20060607	EP 2003-818831	20030905
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK				
PRAI	WO 2003-US27963	W	20030905		
OS	MARPAT 142:373841				
GI					

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Novel amidine and diamidine compds. (1st of 7 claimed Markush formulas

shown as I; variables defined below; e.g. 4,4'-bis(6-amidinobenzimidazol-2-yl)-1,2-diphenylethane tetrahydrochloride (II)) may be useful in the treatment of microbial infections, including mycobacterial, fungal and protozoal infections. Pharmaceutical formulations comprising these compds. can be used in methods of treating microbial infections. Neither pharmacol. activity nor therapeutic use is claimed, but the effectiveness of 11 examples of the claimed compds. against *Trypanosoma rhodesiense* and *Plasmodium falciparum* is tabulated. Although the methods of preparation are not claimed, 9 example preps. of claimed compds. and intermediates are included. For example, II was prepared (64 %) from 4,4'-diformyl-1,2-diphenylethane, 4-amidino-1,2-phenylenediamine hydrochloride hemihydrate and 1,4-benzoquinone in EtOH. For I: X' and X'' = alkyl, alkylene, O, oxy, oxyalkyl, alkyloxy, alkyloxyalkyl, and -C(O)NH(CH<sub>2</sub>)<sub>q</sub>-; m, n, p, and q = 0-10; L = hydroxyalkyl, 1,2-oxazole, 1,3-oxazole, Ph, naphthyl, pyrimidine, alkyl-substituted pyrimidine and -CH(CO<sub>2</sub>R<sub>11</sub>)- (R<sub>11</sub> = H or alkyl); R<sub>1</sub>-R<sub>10</sub> = H, alkyl, hydroxy, oxyalkyl, alkyloxy, halo, aryl, and Y, wherein at least one of R<sub>1</sub>-R<sub>10</sub> = Y, and Y = -C(:NR<sub>12</sub>)NR<sub>13</sub>R<sub>14</sub>, -CH:NNHC(:NR<sub>12</sub>)NR<sub>13</sub>R<sub>14</sub>, and -NHC(NR<sub>12</sub>)NR<sub>13</sub>R<sub>14</sub> (R<sub>12</sub> = H, hydroxy, cycloalkyl, aryl, aralkyl, alkoxy, hydroxycycloalkyl, alkoxycycloalkyl, hydroxyalkyl, aminoalkyl, acyloxy, and alkylaminoalkyl; R<sub>13</sub> and R<sub>14</sub> = H, hydroxy, alkyl, alkoxyalkyl, cycloalkyl, aryl, aralkyl, hydroxyalkyl, aminoalkyl, and alkylaminoalkyl; or R<sub>12</sub> and R<sub>13</sub> together = C<sub>2</sub>-C<sub>10</sub> alkyl, hydroxyalkyl, or alkylene; or R<sub>12</sub> and R<sub>13</sub> together = (R<sub>15</sub>)<sub>j</sub>-substituted o-phenylene (j = 1-3, and R<sub>15</sub> is H or Y)).

IC ICM C07C257-00

CC 28-9 (Heterocyclic Compounds (More Than One Hetero Atom))

Section cross-reference(s): 1, 25, 27

ST amidine prepn antimalarial trypanosomicide; human African trypanosomiasis  
amidine drug prepn; falciparum malaria amidine drug prepn

IT Malaria

(falciparum; preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)

IT Antimalarials

Human

*Plasmodium falciparum*

*Trypanosoma rhodesiense*

Trypanosomicides

(preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)

IT Amidines

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)

IT Infection

(trypanosomiasis; preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)

IT 423165-21-3P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)

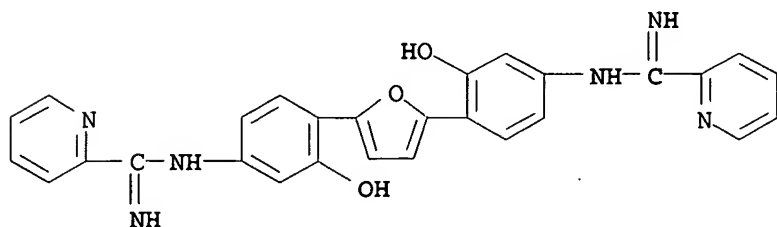
(drug candidate; preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)

IT 26130-55-2P, 3-(Benzyloxy)benzenecarboximidamide 56806-77-0P,  
1,4-Bis[4-[amino(imino)methyl]phenoxy]-2-butanol dihydrochloride  
57928-60-6P, 4-(Benzyloxy)benzenecarboximidamide hydrochloride  
77838-86-9P, 1,4-Bis(5-amidinobenzimidazol-2-yl)benzene 118499-88-0P,  
1,2-Bis[4-[amino(imino)methyl]phenoxy]benzene 148344-27-8P,  
1,4-Bis(5-amidinobenzimidazol-2-yl)-2,5-dimethylbenzene 204589-04-8P,

4,6-Bis(4-amidinophenyl)-2-methylpyrimidine 423165-59-7P,  
2,5-Bis[2-hydroxy-4-[(pyridin-2-yl)iminomethyl]amino]phenyl]furan  
dihydrochloride 423165-69-9P, 2,5-Bis(3-ethoxy-4-  
guanidinophenyl)furan dihydrochloride 500713-52-0P, 9-[4-  
[Amino(imino)methyl]phenoxy]octyl phenyl ether hydrochloride  
500713-59-7P, 4-[(3-Tolyl)methoxy]benzenecarboximidamide hydrochloride  
500714-02-3P, 1,5-Bis[[3-[(imino)(isopropylamino)methyl]phenyl]methoxy]nap  
hthalene 500714-04-5P, 1,5-Bis[[4-[(imino)(isopropylamino)methyl]phenyl]  
methoxy]naphthalene 500714-06-7P, 1,4-Bis[[4-  
[(imino)(isopropylamino)methyl]phenoxy]methyl]naphthalene 500714-08-9P,  
1,5-Bis[3,6-bis(4,5-dihydro-1H-imidazol-2-yl)-9H-carbazol-9-yl]pentane  
500714-29-4P, 5-[3-[Amino(imino)methyl]phenyl]-3-[4-  
[amino(imino)methyl]phenyl]isoxazole 500714-31-8P, 3-[3-  
[Amino(imino)methyl]phenyl]-5-[4-[amino(imino)methyl]phenyl]isoxazole  
500714-34-1P, 1,4-Bis[(5-amidinoindol-2-yl)methyl]benzene 500714-40-9P,  
1,2-Bis[4-[5-[(butylamino)(imino)methyl]benzimidazol-2-yl]phenyl]ethane  
500714-42-1P, 2,7-Bis[[4-[(imino)(isopropylamino)methyl]phenyl]methoxy]nap  
hthalene 500714-44-3P, 2,7-Bis[[3-[(imino)(isopropylamino)methyl]phenyl]  
methoxy]naphthalene 500714-46-5P, 1,4-Bis[6-(4,5-dihydro-1H-imidazol-2-  
yl)benzo[b]furan-2-yl]butane 500714-48-7P, 1,3-Bis[6-  
[(imino)(isopropylamino)methyl]benzo[b]furan-2-yl]propane 500714-53-4P,  
1-[[5-[4-[(sec-Butyl)amino](imino)methyl]phenoxy]pentyl]oxy]-3-[5-  
[(imino)(isopropylamino)methyl]benzimidazol-2-yl]benzene 500714-67-0P,  
5-[4-[Amino(imino)methyl]phenyl]-2-[2-[4-[amino(imino)methyl]phenyl]ethyl]  
oxazole 500714-69-2P, 2,6-Bis(5-amidinobenzimidazol-2-yl)naphthalene  
500714-75-0P, 1,2-Bis[4-(5-amidinobenzimidazol-2-yl)phenyl]ethane  
500714-77-2P, 4,4'-Bis(5-amidinobenzimidazol-2-yl)-1,1'-biphenyl  
500714-79-4P, Bis[4-(5-amidinobenzimidazol-2-yl)phenyl]methane  
500714-81-8P, 1,2-Bis[4-(5-amidinobenzimidazol-2-yl)phenyl]cyclopropane  
500714-83-0P, 2-(5-Amidinobenzimidazol-2-yl)-5-[2-[4-(5-  
amidinobenzimidazol-2-yl)phenyl]ethyl]thiophene 500714-92-1P,  
2-[4-[2-(4-Methoxyphenyl)ethyl]phenyl]-1H-benzimidazole-5-carboximidamide  
500714-93-2P, 2-[4-[2-(4-Ethylphenyl)ethyl]phenyl]-1H-benzimidazole-5-  
carboximidamide 500714-94-3P, 2-[4-[2-(4-Fluorophenyl)ethyl]phenyl]-1H-  
benzimidazole-5-carboximidamide 500714-95-4P, 2-[6-(4-  
Amidinophenyl)pyridin-2-yl]-1H-benzimidazole-5-carboximidamide  
500714-97-6P, 2-(5-Amidinobenzoxazol-2-yl)-5-(4-amidinophenyl)furan  
500714-98-7P, 2-(5-Amidinobenzimidazol-2-yl)-6-(4-amidinophenyl)phenol  
500715-03-7P, 1,5-Bis[4-[[imino(phenyl)methyl]amino]phenoxy]pentane  
500715-13-9P, 1,7-Bis[[4-[amino(imino)methyl]benzoyl]amino]heptane  
634905-88-7P, 1,5-Bis[[3-[amino(imino)methyl]phenyl]methoxy]naphthalene  
733735-45-0P, 1,3-Bis[[4-(4,5-dihydro-1H-imidazol-2-  
yl)phenoxy]methyl]benzene 763922-64-1P, 1,4-Bis[[4-(4,5-dihydro-1H-  
imidazol-2-yl)phenoxy]methyl]benzene 790241-42-8P, 4,4'-Bis(5-  
Amidinobenzimidazol-2-yl)biphenyl tetrahydrochloride 849623-20-7P,  
2,6-Bis(4-amidinobenzimidazol-2-yl)naphthalene tetrahydrochloride  
849623-21-8P, 4,4'-Bis(6-amidinobenzimidazol-2-yl)-1,2-diphenylethane  
tetrahydrochloride 849623-26-3P, 1-[4-(5-Amidinobenzimidazol-2-  
yl)phenyl]-2-[2-(5-amidinobenzimidazol-2-yl)thien-5-yl]ethane  
trihydrochloride 849623-33-2P, 2-(5-Amidinobenzimidazol-2-yl)-6-(4-  
amidinophenyl)pyridine triacetate 849623-37-6P,  
2,5-Bis(4-guanidino-3-methylthiophenyl)furan dihydrochloride  
849623-40-1P, 2-(5-Amidinobenzimidazol-2-yl)-5-(4-amidino-2-  
methylphenyl)furan trihydrochloride 849623-41-2P, Methyl  
4-[4-[amino(imino)methyl]phenoxy]-2-[2-[4-[amino(imino)methyl]phenoxy]ethy  
l]butanoate 849623-42-3P, 2,5-Bis[4-amidino-3-(methylthio)phenyl]furan  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)

(drug candidate; preparation of novel amidines for treating microbial

- infections like human African trypanosomiasis and falciparum malaria)
- IT 98-01-1, 2-Furfuraldehyde, reactions 610-38-8, 3,4-Dinitrobromobenzene 1220-08-2, 4,4'-Diformyl-1,2-diphenylethane 1591-30-6, 4,4'-Dicyanobiphenyl 4701-17-1, 5-Bromothiophene-2-aldehyde 6345-68-2, 3-Benzylloxy-4-bromonitrobenzene 16532-79-9, 4-Bromophenylacetonitrile 17626-40-3, 3,4-Diaminobenzonitrile 31656-49-2, 2,6-Dicyanonaphthalene 34160-40-2, 6-Bromopyridine-2-carboxaldehyde 66717-58-6, 4-Amidino-1,2-phenylenediamine hydrochloride 78881-21-7, 4-Amino-3-methylbenzonitrile 126747-14-6, 4-Cyanophenylboronic acid 193361-76-1, 2,5-Bis(tributylstannyl)furan 347191-10-0, S-(2-Naphthylmethyl) pyridine-2-carboximidothioate hydrobromide
- RL: RCT (Reactant); RACT (Reactant or reagent)
- (preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)
- IT 66-98-8P, 4,4'-Diformyl-1,1'-biphenyl 5060-65-1P, 2,6-Diformylnaphthalene 57279-70-6P, 2-Nitro-5-bromophenetole 96463-58-0P, 2-(4-Bromophenyl)-3-(5-bromothien-2-yl)acrylonitrile 423165-37-1P, 2,5-Bis(3-ethoxy-4-nitrophenyl)furan 423165-42-8P, 2,5-Bis(2-benzylloxy-4-nitrophenyl)furan 423165-50-8P, 2,5-Bis(4-amino-3-ethyloxyphenyl)furan 423165-51-9P, 2,5-Bis(4-amino-2-hydroxyphenyl)furan 834884-79-6P, 6-(4-Cyanophenyl)pyridine-2-carboxaldehyde 849623-22-9P, 2-(4-Bromophenyl)-3-(5-bromothien-2-yl)propionitrile 849623-23-0P, 2-(4-Bromophenyl)-3-(5-bromothien-2-yl)propionic acid 849623-24-1P, 1-(4-Cyanophenyl)-2-(5-cyanothien-2-yl)ethane 849623-25-2P, 1-(4-Formylphenyl)-2-(5-formylthien-2-yl)ethane 849623-30-9P, 2-(5-Cyanobenzimidazol-2-yl)-6-(4-cyanophenyl)pyridine 849623-31-0P, 2-(5-Hydroxyamidinobenzimidazol-2-yl)-6-(4-hydroxyamidinophenyl)pyridine 849623-32-1P, 2-(5-Acetoxyamidinobenzimidazol-2-yl)-6-(4-acetoxyamidinophenyl)pyridine 849623-34-3P, 5-Bromo-2-nitrothioanisole 849623-35-4P, 2,5-Bis(4-nitro-3-methylthiophenyl)furan 849623-36-5P, 2,5-Bis(4-amino-3-methylthiophenyl)furan 849623-38-7P, 2-(4-Cyano-2-methylphenyl)-5-formylfuran 849623-39-8P, 2-(5-Cyanobenzimidazol-2-yl)-5-(4-cyano-2-methylphenyl)furan
- RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)
- (preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)
- IT 423165-21-3P
- RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
- (drug candidate; preparation of novel amidines for treating microbial infections like human African trypanosomiasis and falciparum malaria)
- RN 423165-21-3 HCAPLUS
- CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-hydroxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



- IT 423165-59-7P, 2,5-Bis[2-hydroxy-4-[(pyridin-2-yl)iminomethyl]amino]phenylfuran dihydrochloride 423165-69-9P,

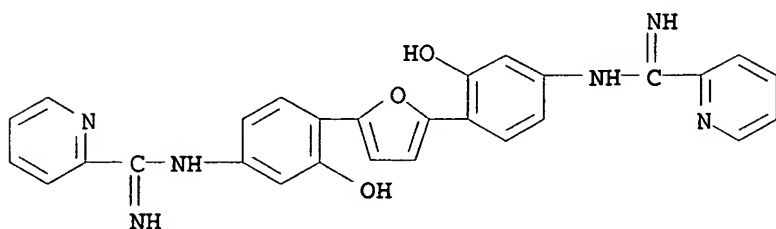
2,5-Bis(3-ethoxy-4-guanidinophenyl)furan dihydrochloride  
849623-37-6P, 2,5-Bis(4-guanidino-3-methylthiophenyl)furan  
dihydrochloride

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)

(drug candidate; preparation of novel amidines for treating microbial  
infections like human African trypanosomiasis and falciparum malaria)

RN 423165-59-7 HCAPLUS

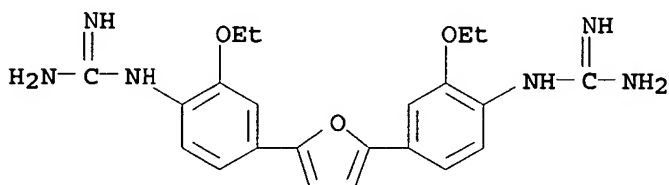
CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-hydroxy-4,1-  
phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 423165-69-9 HCAPLUS

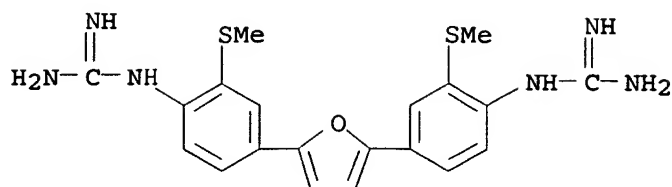
CN Guanidine, N,N'''-[2,5-furandiylbis(2-ethoxy-4,1-phenylene)]bis-,  
dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 849623-37-6 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[2-(methylthio)-4,1-phenylene]]bis-,  
dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RE.CNT 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:120654 HCAPLUS

DN 142:191226

TI Combination of pentamidine or analog and antiproliferative agent drugs for the treatment of neoplasms

IN Nichols, James M.; Lee, Margaret S.; Keith, Curtis T.; Zhang, Yanzhen; Gaw, Debra A.

PA Combinatorx, Incorporated, USA

SO PCT Int. Appl., 71 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005011572	A2	20050210	WO 2004-US23524	20040722
	WO 2005011572	A3	20050310		
	W:				
	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW:				
	BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	US 2005054708	A1	20050310	US 2004-895561	20040721
	AU 2004261148	A1	20050210	AU 2004-261148	20040722
	CA 2529521	AA	20050210	CA 2004-2529521	20040722
	EP 1651211	A2	20060503	EP 2004-778848	20040722
	R:				
	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
PRAI	US 2003-490759P	P	20030728		
	WO 2004-US23524	W	20040722		
OS	MARPAT 142:191226				
AB	The invention features a method for treating a patient having a cancer or other neoplasm by administering to the patient pentamidine or a pentamidine analog and an antiproliferative agent simultaneously or within 14 days of each other in amts. sufficient to treat the patient. The combination of pentamidine and vinblastine provided improved antiproliferative activity against human non-small cell lung carcinoma				

A549 cells.  
IC ICM A61K  
CC 1-6 (Pharmacology)  
ST pentamidine antiproliferative agent drug combination treatment neoplasm;  
vinblastine pentamidine nonsmall lung carcinoma cell inhibition  
IT Bone, neoplasm  
(Ewing's sarcoma; combination of pentamidine or analog and  
antiproliferative agent drugs for treatment of neoplasms)  
IT Sarcoma  
(Ewing's; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Sarcoma  
(Kaposi's; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Lymphoproliferative disorders  
(Waldenstrom's macroglobulinemia; combination of pentamidine or analog  
and antiproliferative agent drugs for treatment of neoplasms)  
IT Kidney, neoplasm  
(Wilms'; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Nerve, neoplasm  
(acoustic neuroma; combination of pentamidine or analog and  
antiproliferative agent drugs for treatment of neoplasms)  
IT Acute myeloid leukemia  
(acute erythroblastic leukemia; combination of pentamidine or analog  
and antiproliferative agent drugs for treatment of neoplasms)  
IT Carcinoma  
(adenocarcinoma; combination of pentamidine or analog and  
antiproliferative agent drugs for treatment of neoplasms)  
IT Neuroglia, neoplasm  
(astrocytoma; combination of pentamidine or analog and  
antiproliferative agent drugs for treatment of neoplasms)  
IT Skin, neoplasm  
(basal cell carcinoma; combination of pentamidine or analog and  
antiproliferative agent drugs for treatment of neoplasms)  
IT Carcinoma  
(basal cell; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Biliary tract, neoplasm  
(bile duct, carcinoma; combination of pentamidine or analog and  
antiproliferative agent drugs for treatment of neoplasms)  
IT Carcinoma  
(bladder; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Carcinoma  
(bronchial; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Bladder, neoplasm  
Bronchi, neoplasm  
Lung, neoplasm  
(carcinoma; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Sarcoma  
(cartilage chondrosarcoma; combination of pentamidine or analog and  
antiproliferative agent drugs for treatment of neoplasms)  
IT Uterus, neoplasm  
(cervix; combination of pentamidine or analog and antiproliferative  
agent drugs for treatment of neoplasms)  
IT Carcinoma  
(choledochal; combination of pentamidine or analog and

antiproliferative agent drugs for treatment of neoplasms)

IT Cartilage, neoplasm  
(chondrosarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Neoplasm  
(chordoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
Chorion, neoplasm  
(choriocarcinoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Intestine, neoplasm  
(colon, carcinoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
Intestine, neoplasm  
(colon; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Acute lymphocytic leukemia  
Acute monocytic leukemia  
Acute myeloid leukemia  
Acute myelomonocytic leukemia  
Acute promyelocytic leukemia  
Antitumor agents  
Carcinoma  
Chronic lymphocytic leukemia  
Chronic myeloid leukemia  
Combination chemotherapy  
Cytotoxic agents  
Hodgkin's disease  
Human  
Leukemia  
Leukemia  
Lung, neoplasm  
Mammary gland, neoplasm  
Melanoma  
Neoplasm  
Neuroglia, neoplasm  
Ovary, neoplasm  
Pancreas, neoplasm  
Polycythemia vera  
Prostate gland, neoplasm  
Sarcoma  
Sebaceous gland  
Sweat gland  
Testis, neoplasm  
Uterus, neoplasm  
(combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Brain, neoplasm  
(craniopharyngioma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Ovary, neoplasm  
(cystadenocarcinoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(embryonal; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Brain, neoplasm  
(ependymoma; combination of pentamidine or analog and antiproliferative

agent drugs for treatment of neoplasms)

IT Sarcoma  
(fibrosarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Neoplasm  
(heavy chain disease; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Blood vessel, neoplasm  
(hemangioblastoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Blood vessel, neoplasm  
Sarcoma  
(hemangiosarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(hepatocellular; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Liver, neoplasm  
(hepatoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Drug delivery systems  
(inhalants; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Drug delivery systems  
(injections, i.m.; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Drug delivery systems  
(injections, i.v.; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Myoma  
Sarcoma  
(leiomyosarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Adipose tissue, neoplasm  
Sarcoma  
(liposarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Sarcoma  
(lymphangiosarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Brain, neoplasm  
(medulloblastoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Nervous system, neoplasm  
(meningioma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Mesothelium, neoplasm  
(mesothelioma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Astrocyte  
(neoplasm, astrocytoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Notochord  
(neoplasm, chordoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Meninges  
(neoplasm, meningioma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Oligodendrocyte  
(neoplasm, oligodendroglioma; combination of pentamidine or analog and

antiproliferative agent drugs for treatment of neoplasms)

IT Synovial membrane, disease  
(neoplasm, sarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Schwann cell  
(neoplasm, schwannoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Nerve, neoplasm  
(neuroblastoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Lymphoma  
(non-Hodgkin's; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Lung, neoplasm  
(non-small-cell carcinoma, treatment of; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Neuroglia, neoplasm  
(oligodendroglioma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Drug delivery systems  
(oral; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Bone, neoplasm  
Sarcoma  
(osteosarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(ovarian cystadenocarcinoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(papillary adenocarcinoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(papillary; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Brain, neoplasm  
(pinealoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(pulmonary non-small-cell, treatment of; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(pulmonary small-cell; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(pulmonary; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Drug delivery systems  
(rectal; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Kidney, neoplasm  
(renal cell carcinoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(renal cell; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Eye, neoplasm  
(retinoblastoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Sarcoma

(rhabdomyosarcoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Nervous system, neoplasm  
(schwannoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Testis, neoplasm  
(seminoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Lung, neoplasm  
(small-cell carcinoma; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Carcinoma  
(squamous cell; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT Sarcoma  
(synovial membrane; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT 300865-11-6, PTP-1B  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(PTP-1B, inhibitor, for cancer treatment; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT 838835-09-9 838835-10-2 838835-11-3 838835-12-4 838835-13-5  
838835-14-6  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(antiproliferative activity against non-small cell lung carcinoma A549 cells; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT 865-21-4, Vinblastine 33419-42-0, Etoposide 41575-94-4, Carboplatin 95058-81-4, Gemcitabine  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(as antiproliferative agent; combination of pentamidine or analog and antiproliferative agent drugs for treatment of neoplasms)

IT 100-33-4, Pentamidine 100-33-4D, Pentamidine, derivs., salts  
101-62-2, Phenamidine 104-32-5, Propamidine 122-06-5, Stilbamidine 495-99-8, Hydroxystilbamidine 496-00-4, Dibromopropamidine 536-71-0, Diminazene 618-39-3, Benzamidine 1402-38-6, Actinomycin 1438-30-8, Netropsin 3459-96-9, Amicarbalide 11056-06-7, Bleomycin 20830-81-3, Daunorubicin 23214-92-8, Doxorubicin 25316-40-9, Adriamycin 33763-36-9, 3,7-Dicyanodibenzofuran 39389-47-4, Distamycin 41738-62-9, 3,7-Dicyanodibenzothiophene 41738-64-1, 3,7-Diaminodibenzothiophene 66639-24-5 67019-91-4, 3,7-Dibromodibenzofuran 73819-26-8, 2,5-Bis(4-amidinophenyl)furan 73819-28-0 74733-75-8, Bis(5-amidino-2-benzimidazolyl)methane 75846-15-0 75846-16-1 80498-71-1 80498-74-4 83834-10-0, 3,7-Dibromodibenzothiophene 91371-12-9, 4,4'-Dibromo-2,2'-dinitrobiphenyl 94345-47-8, Heptamidine 100562-53-6 101689-95-6 124076-61-5, Butamidine 124076-65-9 148344-21-2 157168-41-7, 1,4-Bis[5-(2-imidazolyl)-2-benzimidazolyl]-2-ethylbutane 157168-42-8, 1,4-Bis[5-(2-imidazolyl)-2-benzimidazolyl]-2,3-diethyl-2-butene 157168-43-9, 1,4-Bis[5-(2-imidazolyl)-2-benzimidazolyl]-1-butene 157168-44-0, 1,4-Bis[5-(2-imidazolyl)-2-benzimidazolyl]-2-butene 157168-45-1, 1,4-Bis[5-(2-imidazolyl)-2-benzimidazolyl]-1-methylbutane 157168-46-2, 1,4-Bis[5-(2-imidazolyl)-2-benzimidazolyl]-1-methyl-1-butene 157168-48-4 157168-49-5, 1,4-Bis[5-(2-imidazolyl)-2-benzimidazolyl]butane 157168-50-8, Bis[5-(2-imidazolyl)-2-benzimidazolyl]methane 157168-51-9, 1,3-Bis[5-(2-imidazolyl)-2-benzimidazolyl]propane 160522-89-4 161374-52-3, Nonamidine 165596-46-3 166601-05-4 166601-10-1 166601-11-2 168637-58-9 173420-56-9 173420-58-1 173420-61-6 173420-63-8 179118-03-7

179118-04-8 179118-05-9 179118-08-2 179118-10-6 179118-22-0  
186395-09-5 186395-18-6 186395-20-0 186395-22-2 186395-24-4  
186395-25-5 186395-26-6 186395-27-7 186395-28-8 186395-29-9  
186395-30-2 186953-56-0, 2,5-Bis(4-amidinophenyl)furan-bis-O-  
methyramidoxime 190958-06-6 190958-12-4 190958-16-8 200878-34-8  
212829-50-0 213972-16-8 216308-12-2 216308-13-3 216308-14-4  
216308-16-6 216308-18-8 216502-98-6 216502-99-7 216503-00-3  
216503-01-4 216503-02-5 216503-05-8 216503-06-9 216503-07-0  
216503-08-1 216503-09-2 219483-82-6 232940-82-8,  
2,8-Dicyanodibenzofuran 232940-83-9 232940-84-0 242807-42-7  
247032-11-7 247032-13-9 247032-15-1 247032-16-2 247032-17-3  
247032-18-4 338945-24-7, 2,8-Dibenzofurandicarboximidamide 415718-14-8  
415718-17-1 415718-20-6 415718-26-2 415718-29-5 415718-32-0,  
2,8-Dibenzothiophenedicarboximidamide 415718-35-3 415718-41-1,  
3,7-Dibenzothiophenedicarboximidamide 415718-44-4 415718-47-7  
415718-50-2 648415-32-1 648415-33-2 648415-34-3  
648415-36-5 648415-37-6 648415-38-7  
648415-39-8 648415-40-1 648415-41-2  
648415-42-3 648415-43-4 648415-44-5 648415-45-6 648415-46-7  
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648415-52-5 648415-53-6 648415-54-7 648415-55-8 648415-58-1  
648415-59-2 648417-90-7 648417-91-8 648417-92-9 648417-93-0  
648417-94-1 648417-95-2 648417-96-3 648417-97-4 648418-01-3  
RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination of pentamidine or analog and antiproliferative agent drugs.  
for treatment of neoplasms)

IT 95725-91-0

RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitor, for cancer treatment; combination of pentamidine or analog  
and antiproliferative agent drugs for treatment of neoplasms)

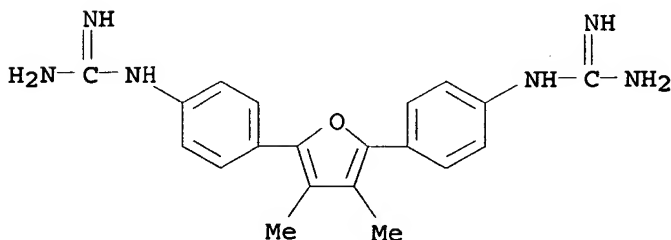
IT 648415-34-3 648415-37-6 648415-38-7

648415-39-8 648415-40-1 648415-41-2

RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);  
THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(combination of pentamidine or analog and antiproliferative agent drugs  
for treatment of neoplasms)

RN 648415-34-3 HCAPLUS

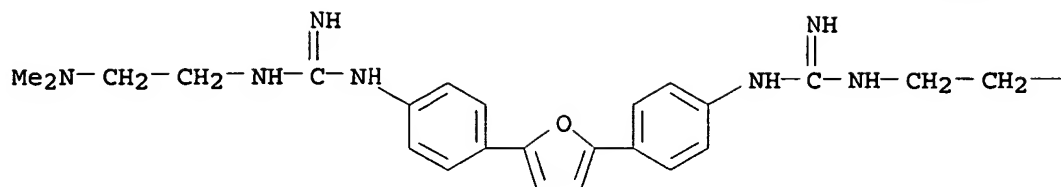
CN Guanidine, N,N'''-[(3,4-dimethyl-2,5-furandiyl)di-4,1-phenylene]bis- (9CI)  
(CA INDEX NAME)



RN 648415-37-6 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl)di-4,1-phenylene]bis[N'-(2-  
(dimethylamino)ethyl]- (9CI) (CA INDEX NAME)

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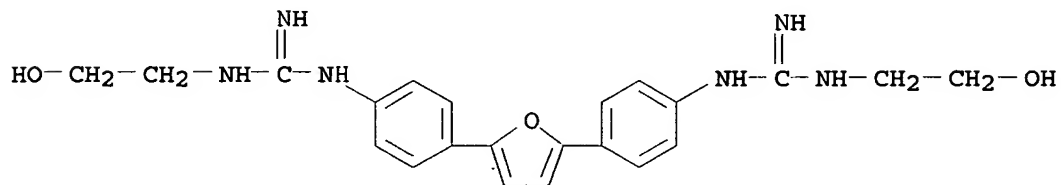


PAGE 1-B

— NMe<sub>2</sub>

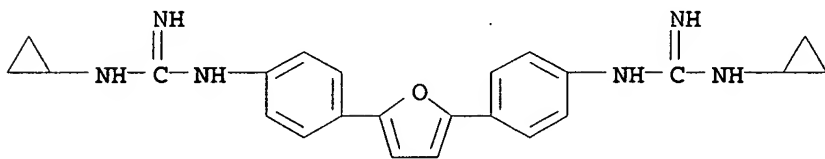
RN 648415-38-7 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyldi-4,1-phenylene)bis[N'-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)



RN 648415-39-8 HCAPLUS

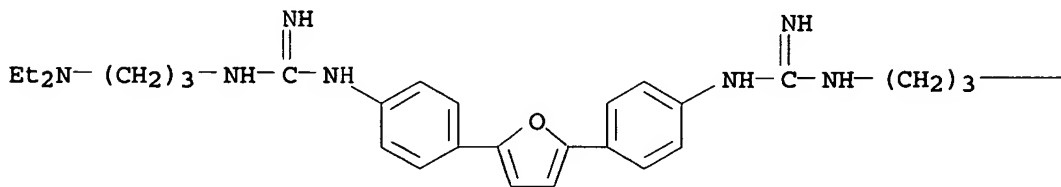
CN Guanidine, N,N'''-(2,5-furandiyldi-4,1-phenylene)bis[N'-cyclopropyl- (9CI) (CA INDEX NAME)



RN 648415-40-1 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyldi-4,1-phenylene)bis[N'-(3-(diethylamino)propyl)- (9CI) (CA INDEX NAME)

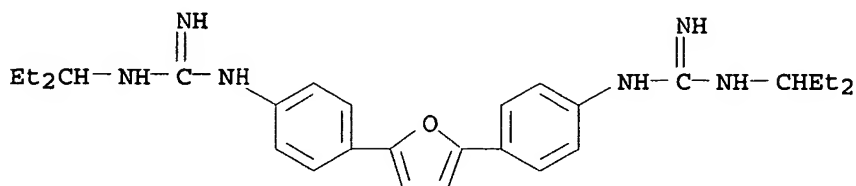
PAGE 1-A



PAGE 1-B

— Net<sub>2</sub>

RN 648415-41-2 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(1-ethylpropyl)-  
(9CI) (CA INDEX NAME)

L12 ANSWER 6 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:115848 HCAPLUS

DN 142:403921

TI Inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells

AU Stefanovic, Lela; Stephens, Chad E.; Boykin, David; Stefanovic, Branko

CS Department of Biomedical Science, Florida State University College of Medicine, Tallahassee, FL, 32306, USA

SO Life Sciences (2005), 76(17), 2011-2026

CODEN: LIFSAK; ISSN: 0024-3205

PB Elsevier B.V.

DT Journal

LA English

AB Excessive production of extracellular matrix is responsible for clin. manifestations of fibroproliferative disorders and drugs which can inhibit excessive synthesis of type I collagen are needed for the therapy. Several dicationic diphenylfurans were synthesized and were found to bind RNA. Two of these type compds. were able to reduce synthesis of type I collagen by human fibroblasts and human activated hepatic stellate cells (HSCs). Activated HSCs are responsible for collagen production in liver fibrosis. When added at 40  $\mu$ M compound DB588 reduced intracellular level and secretion of procollagen  $\alpha$ 1(I) by 50%, while compound DB654 reduced these parameters by more than 80% at 20  $\mu$ M. DB 654 also significantly reduced secretion of fibronectin. Toxic effects were observed at 80  $\mu$ M for DB588 and 40  $\mu$ M for DB654. DB654 reduced expression of a reporter gene with collagen signal peptide, while expression of the same gene without signal peptide was unaffected. Also, expression of intracellular proteins tubulin and calnexin was unchanged. DB 654 accumulated inside the cell in the cytoplasm and did not change the steady-state level of collagen mRNAs. Treatment of cells with proteasome inhibitor MG132 did not change the inhibitory effect of DB654, suggesting that DB654 acts as suppressor of translation of proteins containing a signal peptide. Most secreted proteins of fibroblasts and activated HSCs are components of extracellular matrix. Therefore inhibition of their production, as shown here for procollagen  $\alpha$ 1(I) and fibronectin, may be a useful property of some of diphenylfurans, making these compds. a basis for

development of antifibrotic drugs.

CC 1-10 (Pharmacology)

ST dicationic diphenylfuran collagen fibroblast hepatoprotectant

IT Fibroblast  
(disease; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Disease, animal  
(fibroblast; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Liver, disease  
(fibrosis; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Fibrosis  
(hepatic; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Cytoprotective agents  
(hepatoprotective; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Human  
(inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Collagens, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(procollagens,  $\alpha 1(I)$ ; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Fibroblast  
(proliferation; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Liver  
(stellate cell; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT Collagens, biological studies  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(type I; inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

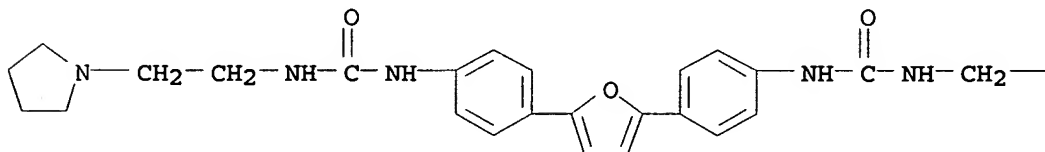
IT 850410-84-3P, DB 588  
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT 433735-88-7P, DB654  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)

IT 850360-91-7P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(inhibitory effect of dicationic diphenylfurans on production of type I

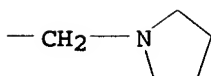
collagen by human fibroblasts and activated hepatic stellate cells)  
IT 1643-19-2, Tetrabutyl ammonium bromide 7154-73-6, 1-(2-Aminoethyl)pyrrolidine 26628-22-8, Sodium azide 101579-34-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)  
IT 850360-92-8P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)  
IT 850410-84-3P, DB 588  
RL: PAC (Pharmacological activity); PRP (Properties); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; USES (Uses)  
(inhibitory effect of dicationic diphenylfurans on production of type I collagen by human fibroblasts and activated hepatic stellate cells)  
RN 850410-84-3 HCAPLUS  
CN Urea, N,N''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-[2-(1-pyrrolidinyl)ethyl]-, dihydrochloride (9CI) (CA INDEX NAME)

PAGE 1-A



●2 HCl

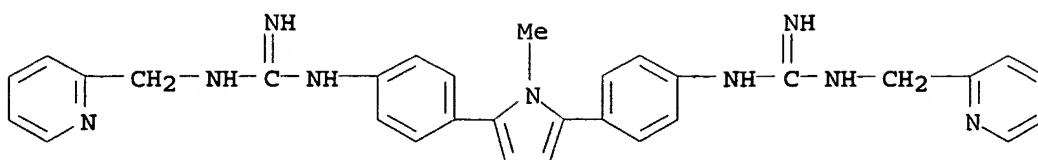
PAGE 1-B



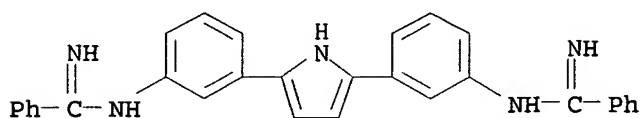
RE.CNT 54 THERE ARE 54 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN  
AN 2005:6494 HCAPLUS  
DN 143:193871  
TI Synthesis of dicationic 2,5-diarylpyrroles  
AU Arafa, Reem K.; Brun, Reto; Werbovetz, Karl A.; Tanious, Farial A.;  
Wilson, W. David; Boykin, David W.  
CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303, USA  
SO Heterocyclic Communications (2004), 10(6), 423-428  
CODEN: HCOMEX; ISSN: 0793-0283  
PB Freund Publishing House Ltd.  
DT Journal  
LA English

OS CASREACT 143:193871  
AB A new series of dicationic reversed amidine derivs. and a substituted guanidine analog of 2,5-diarylpyrrole obtained starting from the corresponding 2,5-bis(aminoaryl)pyrroles are reported. The results of DNA binding studies and antimicrobial screening assays for these compds. are presented.  
CC 27-10 (Heterocyclic Compounds (One Hetero Atom))  
Section cross-reference(s): 1, 6  
ST dicationic diaryl pyrrole prepn DNA binding antimicrobial; reversed dicationic amidine deriv prepn reaction; aminoaryl pyrrole prepn reaction  
IT Antimicrobial agents  
Leishmania donovani  
Plasmodium falciparum  
Trypanosoma rhodesiense  
(synthesis, DNA binding, and antimicrobial activity of dicationic diarylpyrroles)  
IT DNA  
RL: BCP (Biochemical process); BIOL (Biological study); PROC (Process)  
(synthesis, DNA binding, and antimicrobial activity of dicationic diarylpyrroles)  
IT 861806-23-7P 861806-28-2P 861806-29-3P  
861806-30-6P 861806-31-7P 861806-32-8P  
861806-33-9P 861806-34-0P 861806-35-1P  
861806-36-2P 861806-38-4P 861806-39-5P  
861806-40-8P 861806-41-9P  
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(synthesis, DNA binding, and antimicrobial activity of dicationic diarylpyrroles)  
IT 99-81-0, 4-Nitrophenacyl bromide 100-19-6, p-Nitroacetophenone  
121-89-1, m-Nitroacetophenone 3731-51-9, 2-(Aminomethyl)pyridine  
16182-04-0 347191-10-0 347191-23-5  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(synthesis, DNA binding, and antimicrobial activity of dicationic diarylpyrroles)  
IT 108791-66-8P 137596-49-7P 137596-50-0P 162878-72-0P  
861806-21-5P 861806-22-6P 861806-24-8P 861806-25-9P  
861806-26-0P 861806-27-1P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(synthesis, DNA binding, and antimicrobial activity of dicationic diarylpyrroles)  
IT 861806-23-7P 861806-28-2P 861806-29-3P  
861806-30-6P 861806-31-7P 861806-32-8P  
861806-33-9P 861806-34-0P 861806-35-1P  
861806-36-2P 861806-38-4P 861806-39-5P  
861806-40-8P 861806-41-9P  
RL: BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(synthesis, DNA binding, and antimicrobial activity of dicationic diarylpyrroles)  
RN 861806-23-7 HCAPLUS  
CN Guanidine, N,N'''-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis[N'-(2-pyridinylmethyl)- (9CI) (CA INDEX NAME)]

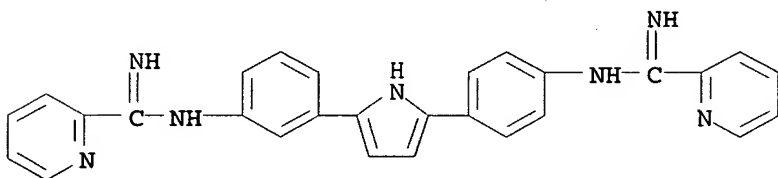


RN 861806-28-2 HCAPLUS

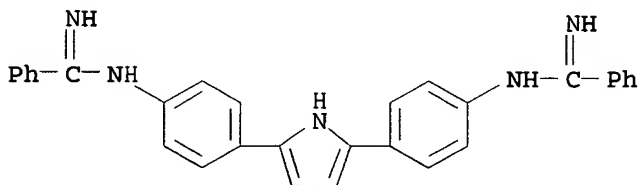
CN Benzenecarboximidamide, N,N'-(1H-pyrrole-2,5-diyl-3,1-phenylene)bis-  
(9CI) (CA INDEX NAME)

RN 861806-29-3 HCAPLUS

CN 2-Pyridinecarboximidamide, N-[3-[5-[4-[(imino-2-pyridinylmethyl)amino]phenyl]-1H-pyrrol-2-yl]phenyl]- (9CI) (CA INDEX NAME)

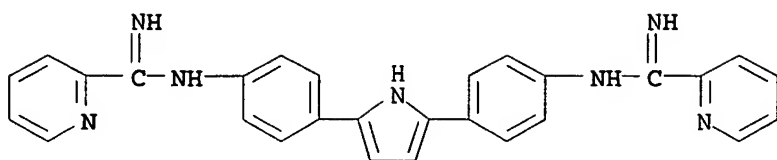


RN 861806-30-6 HCAPLUS

CN Benzenecarboximidamide, N,N'-(1H-pyrrole-2,5-diyl-4,1-phenylene)bis-  
(9CI) (CA INDEX NAME)

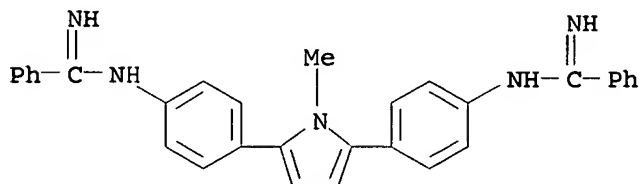
RN 861806-31-7 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-(1H-pyrrole-2,5-diyl-4,1-phenylene)bis-  
(9CI) (CA INDEX NAME)



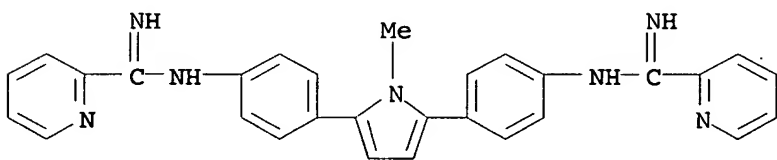
RN 861806-32-8 HCAPLUS

CN Benzenecarboximidamide, N,N'-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis- (9CI) (CA INDEX NAME)



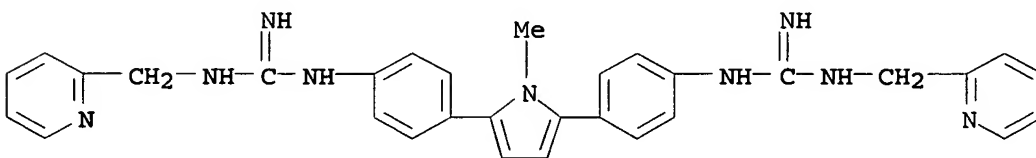
RN 861806-33-9 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis- (9CI) (CA INDEX NAME)



RN 861806-34-0 HCAPLUS

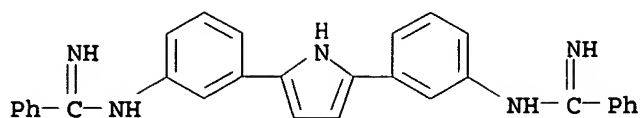
CN Guanidine, N,N'-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis[N'-(2-pyridinylmethyl)-, tetrahydrochloride (9CI) (CA INDEX NAME)



● 4 HCl

RN 861806-35-1 HCAPLUS

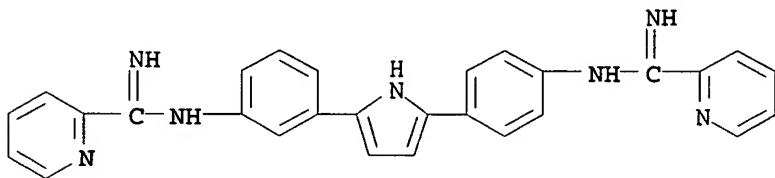
CN Benzenecarboximidamide, N,N'-[(1H-pyrrole-2,5-diyl)di-3,1-phenylene]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 861806-36-2 HCAPLUS

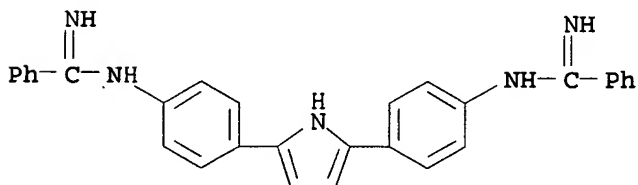
CN 2-Pyridinecarboximidamide, N-[3-[5-[4-[(imino-2-pyridinylmethyl)amino]phenyl]-1H-pyrrol-2-yl]phenyl]-, hydrochloride (3:7) (9CI) (CA INDEX NAME)



●7/3 HCl

RN 861806-38-4 HCAPLUS

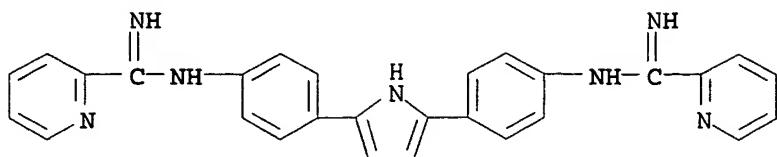
CN Benzenecarboximidamide, N,N'-(1H-pyrrole-2,5-diyl)di-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 861806-39-5 HCAPLUS

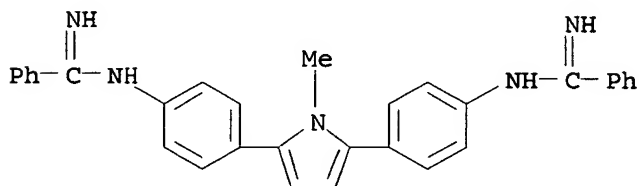
CN 2-Pyridinecarboximidamide, N,N'-(1H-pyrrole-2,5-diyl)di-4,1-phenylene)bis-, hydrochloride (4:13) (9CI) (CA INDEX NAME)



●13/4 HCl

RN 861806-40-8 HCAPLUS

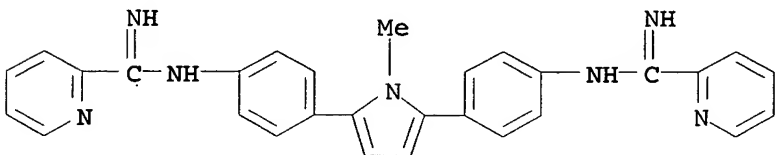
CN Benzenecarboximidamide, N,N''-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 861806-41-9 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[(1-methyl-1H-pyrrole-2,5-diyl)di-4,1-phenylene]bis-, hydrochloride (5:13) (9CI) (CA INDEX NAME)



●13/5 HCl

IT 861806-21-5P 861806-22-6P

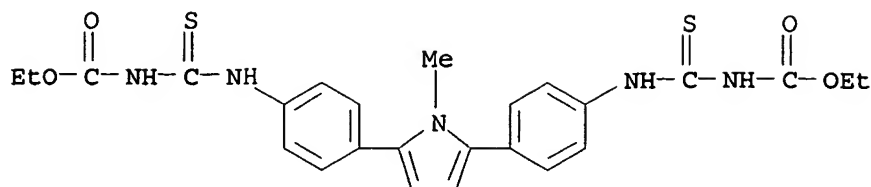
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(synthesis, DNA binding, and antimicrobial activity of dicationic diarylpyrroles)

RN 861806-21-5 HCAPLUS

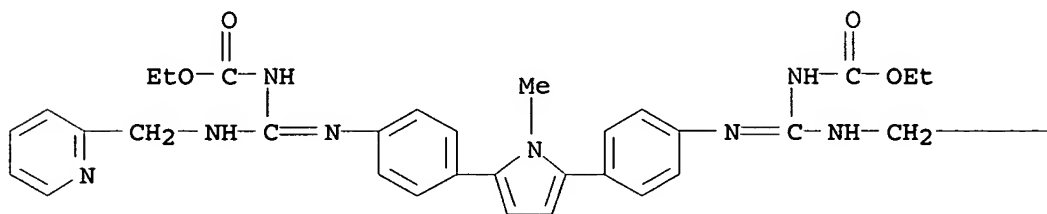
CN Carbamic acid, [(1-methyl-1H-pyrrole-2,5-diyl)bis(4,1-phenyleneiminocarbonothioyl)]bis-, diethyl ester (9CI) (CA INDEX NAME)



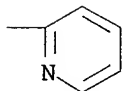
RN 861806-22-6 HCAPLUS

CN Carbamic acid, [(1-methyl-1H-pyrrole-2,5-diyl)bis[4,1-phenyleneimino]]bis-, diethyl ester (9CI) (CA INDEX NAME)

PAGE 1-A



PAGE 1-B



RE.CNT 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 8 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:743244 HCAPLUS

DN 141:391803

TI Activities of dicationic compounds against *Trichomonas vaginalis*

AU Crowell, Andrea L.; Stephens, Chad E.; Kumar, Arvind; Boykin, David W.;  
Secor, W. Evan

CS Division of Parasitic Diseases, National Center for Infectious Diseases,  
Centers for Disease Control and Prevention, Public Health Service, U.S.  
Department of Health and Human Services, Atlanta, GA, USA

SO Antimicrobial Agents and Chemotherapy (2004), 48(9), 3602-3605  
CODEN: AMACQ; ISSN: 0066-4804

PB American Society for Microbiology

DT Journal

LA English

AB The authors evaluated 44 novel cationic compds. for activity against  
metronidazole-sensitive and -resistant *Trichomonas vaginalis* isolates.  
Six compds. in three different structural classes demonstrated 50%  
inhibitory concns. as low as 1  $\mu$ M against both sensitive and resistant  
isolates, suggesting a mode of action independent of parasite biochem.

pathways that confer resistance to 5-nitroimidazoles.

CC 10-5 (Microbial, Algal, and Fungal Biochemistry)

ST protozoacide Trichomonas

IT Protozoacides  
Trichomonas vaginalis  
(activities of dicationic compds. against Trichomonas vaginalis)

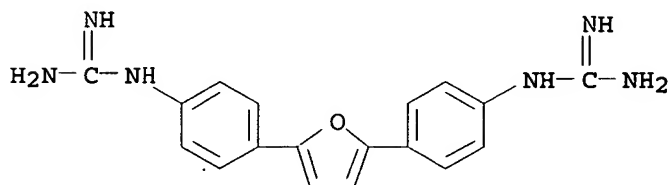
IT 100-33-4, Pentamidine 443-48-1, Metronidazole 908-54-3, Berenil 19387-91-8, Tinidazole 73819-26-8, DB75 173420-56-9, DB181 186953-56-0, DB289 192525-52-3, DB249 242807-42-7, DB 690 442842-45-7, DB673 790241-43-9, DB 818  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(activities of dicationic compds. against Trichomonas vaginalis)

IT 212829-47-5P, DB364 790241-42-8P, DB 507  
RL: BSU (Biological study, unclassified); PRP (Properties); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
(activities of dicationic compds. against Trichomonas vaginalis)

IT 442842-45-7, DB673  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(activities of dicationic compds. against Trichomonas vaginalis)

RN 442842-45-7 HCAPLUS

CN Guanidine, N,N''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



RE.CNT 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 9 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:60255 HCAPLUS

DN 140:105258

TI Benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms

IN Borisy, Alexis; Keith, Curtis; Foley, Michael A.; Stockwell, Brent R.; Gaw, Debra A.

PA Combinatorx, Incorporated, USA

SO PCT Int. Appl., 79 pp.  
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004006849	A2	20040122	WO 2003-US21984	20030715
WO 2004006849	A3	20040603		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,

KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG  
 AU 2003251904 A1 20040202 AU 2003-251904 20030715  
 PRAI US 2002-396151P P 20020715  
 WO 2003-US21984 W 20030715  
 OS MARPAT 140:105258  
 AB The invention features a method for treating a patient having a cancer or  
 other neoplasm, by administering to the patient (i) a benzimidazole or a  
 metabolite or analog thereof; and (ii) pentamidine or a metabolite or  
 analog thereof simultaneously or within 14 days of each other in amts.  
 sufficient to inhibit the growth of the neoplasm.  
 IC ICM A61K  
 CC 1-6 (Pharmacology)  
 ST benzimidazole compd pentamidine compd combination neoplasm treatment;  
 antitumor benzimidazole compd pentamidine compd combination  
 IT Bone, neoplasm  
 (Ewing's sarcoma; benzimidazole compound-pentamidine compound combinations  
 for the treatment of neoplasms)  
 IT Sarcoma  
 (Ewing's; benzimidazole compound-pentamidine compound combinations for the  
 treatment of neoplasms)  
 IT Sarcoma  
 (Kaposi's; benzimidazole compound-pentamidine compound combinations for the  
 treatment of neoplasms)  
 IT Lymphoproliferative disorders  
 (Waldenstrom's macroglobulinemia; benzimidazole compound-pentamidine  
 compound combinations for the treatment of neoplasms)  
 IT Kidney, neoplasm  
 (Wilms'; benzimidazole compound-pentamidine compound combinations for the  
 treatment of neoplasms)  
 IT Nerve, neoplasm  
 (acoustic neuroma; benzimidazole compound-pentamidine compound combinations  
 for the treatment of neoplasms)  
 IT Acute myeloid leukemia  
 (acute erythroblastic leukemia, acute; benzimidazole compound-pentamidine  
 compound combinations for the treatment of neoplasms)  
 IT Carcinoma  
 Lung, neoplasm  
 (adenocarcinoma; benzimidazole compound-pentamidine compound combinations  
 for the treatment of neoplasms)  
 IT Neuroglia, neoplasm  
 (astrocytoma; benzimidazole compound-pentamidine compound combinations for  
 the treatment of neoplasms)  
 IT Skin, neoplasm  
 (basal cell carcinoma; benzimidazole compound-pentamidine compound  
 combinations for the treatment of neoplasms)  
 IT Carcinoma  
 (basal cell; benzimidazole compound-pentamidine compound combinations for  
 the treatment of neoplasms)  
 IT Acute lymphocytic leukemia  
 Acute monocytic leukemia  
 Acute myeloid leukemia  
 Acute myelomonocytic leukemia  
 Acute promyelocytic leukemia  
 Antitumor agents  
 Carcinoma  
 Chronic lymphocytic leukemia  
 Chronic myeloid leukemia  
 Drug delivery systems

Drug interactions  
Drug screening  
Hodgkin's disease  
Human  
Leukemia  
Leukemia  
Mammary gland, neoplasm  
Melanoma  
Neoplasm  
Neuroglia, neoplasm  
Ovary, neoplasm  
Pancreas, neoplasm  
Polycythemia vera  
Prostate gland, neoplasm  
Testis, neoplasm  
Uterus, neoplasm  
    (benzimidazole compound-pentamidine compound combinations for the treatment  
    of neoplasms)  
IT Biliary tract, neoplasm  
    (bile duct, carcinoma; benzimidazole compound-pentamidine compound  
    combinations for the treatment of neoplasms)  
IT Carcinoma  
    (bladder; benzimidazole compound-pentamidine compound combinations for the  
    treatment of neoplasms)  
IT Carcinoma  
    (bronchial; benzimidazole compound-pentamidine compound combinations for  
    the treatment of neoplasms)  
IT Bladder, neoplasm  
Bronchi, neoplasm  
Lung, neoplasm  
Sebaceous gland  
Sweat gland  
    (carcinoma; benzimidazole compound-pentamidine compound combinations for  
    the treatment of neoplasms)  
IT Sarcoma  
    (cartilage chondrosarcoma; benzimidazole compound-pentamidine compound  
    combinations for the treatment of neoplasms)  
IT Uterus, neoplasm  
    (cervix; benzimidazole compound-pentamidine compound combinations for the  
    treatment of neoplasms)  
IT Carcinoma  
    (choledochal; benzimidazole compound-pentamidine compound combinations for  
    the treatment of neoplasms)  
IT Cartilage, neoplasm  
    (chondrosarcoma; benzimidazole compound-pentamidine compound combinations  
    for the treatment of neoplasms)  
IT Neoplasm  
    (chordoma; benzimidazole compound-pentamidine compound combinations for the  
    treatment of neoplasms)  
IT Carcinoma  
Chorion, neoplasm  
    (choriocarcinoma; benzimidazole compound-pentamidine compound combinations  
    for the treatment of neoplasms)  
IT Intestine, neoplasm  
    (colon, carcinoma; benzimidazole compound-pentamidine compound combinations  
    for the treatment of neoplasms)  
IT Carcinoma  
    (colon; benzimidazole compound-pentamidine compound combinations for the  
    treatment of neoplasms)  
IT Neoplasm

(craniopharyngioma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Ovary, neoplasm  
(cystadenocarcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(embryonal; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Brain, neoplasm  
(ependymoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(fibrosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Disease, animal  
(heavy chain disease; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Blood vessel, neoplasm  
(hemangioblastoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Blood vessel, neoplasm  
Sarcoma  
(hemangiosarcoma, lymphangiosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Blood vessel, neoplasm  
Sarcoma  
(hemangiosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(hepatocellular; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Liver, neoplasm  
(hepatoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(inhalants; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(injections, i.m.; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(injections, i.v.; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(large cell; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Myoma  
Sarcoma  
(leiomyosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Adipose tissue, neoplasm  
Sarcoma  
(liposarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(lymphangioendotheliosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(medullary; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Brain, neoplasm  
(medulloblastoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Nervous system, neoplasm  
(meningioma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Mesothelium, neoplasm  
(mesothelioma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(myxosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Astrocyte  
(neoplasm, astrocytoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Notochord  
(neoplasm, chordoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Meninges  
(neoplasm, meningioma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Oligodendrocyte  
(neoplasm, oligodendroglioma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Schwann cell  
(neoplasm, schwannoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Nerve, neoplasm  
(neuroblastoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Lymphoma  
(non-Hodgkin's; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Neuroglia, neoplasm  
(oligodendroglioma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(oral; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Bone, neoplasm  
Sarcoma  
(osteosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(ovarian cystadenocarcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Thyroid gland, neoplasm  
(papillary carcinoma, adenocarcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Thyroid gland, neoplasm  
(papillary carcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Pineal gland  
(pinealoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(pulmonary adenocarcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(pulmonary small-cell; benzimidazole compound-pentamidine compound

combinations for the treatment of neoplasms)

IT Carcinoma  
(pulmonary; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(rectal; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Kidney, neoplasm  
(renal cell carcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(renal cell; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Eye, neoplasm  
(retinoblastoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(rhabdomyosarcoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Nervous system, neoplasm  
(schwannoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Testis, neoplasm  
(seminoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Lung, neoplasm  
(small-cell carcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(squamous cell; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Neoplasm  
(synovioma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(thyroid papillary, adenocarcinoma; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(thyroid papillary; benzimidazole compound-pentamidine compound combinations for the treatment of neoplasms)

IT 51-17-2D, Benzimidazole, derivs. 60-56-0, Mercazole 100-33-4, Pentamidine 100-33-4D, Pentamidine, derivs. 101-62-2, Phenamidine 104-32-5, Propamidine 122-06-5, Stilbamidine 140-64-7, Pentamidine isethionate 148-79-8, Thiabendazole 495-99-8, Hydroxystilbamidine 496-00-4, Dibrompropamidine 536-71-0, Diminazene 548-73-2, Droperidol 618-39-3, Benzamidine 1402-38-6, Actinomycin 1438-30-8, Netropsin 1929-88-0, Benzthiazuron 2062-78-4, Pimozide 3459-96-9, Amicarbalide 6306-71-4, Lobendazole 11056-06-7, Bleomycin 14255-87-9, Parbendazole 17804-35-2, Benomyl 18691-97-9, Methabenzthiazuron 20559-55-1, Oxibendazole 20830-81-3, Daunorubicin 24370-25-0, 2-Benzimidazolylurea 26097-80-3, Cambendazole 26130-02-9, Frentizole 31430-15-6, Flubendazole 31430-18-9, Nocodazole 31431-39-7, Mebendazole 31431-39-7D, Mebendazole, derivs. 31431-43-3, Cyclobendazole 33016-12-5, TN-16 33763-36-9, 3,7-Dibenzofurandicarbonitrile 39389-47-4, Distamycin 41738-62-9, 3,7-Dibenzothiophenedicarbonitrile 41738-64-1, 3,7-Dibenzothiophenediamine 43210-67-9, Fenbendazole 53716-50-0, Oxfendazole 54029-12-8, Albendazole sulfoxide 54965-21-8, Albendazole 54965-21-8D, Albendazole, derivs. 57808-66-9, Domperidone 61570-90-9, Tioxidazole 66639-24-5 67019-91-4 68844-77-9, Astemizole 73590-58-6, Omeprazole 73819-26-8 74733-75-8 75184-71-3, Albendazole

sulfone 75846-15-0 75846-16-1 80434-77-1, NSC 181928 80498-71-1  
 80498-74-4 83834-10-0 90509-02-7, Luxabendazole 91371-12-9  
 94345-47-8, Heptamidine 100562-53-6 101689-95-6 116644-53-2,  
 Mibefradil 124076-61-5, Butamidine 124076-65-9 148344-21-2  
 157168-41-7 157168-42-8 157168-43-9 157168-44-0 157168-45-1  
 157168-46-2 157168-47-3 157168-48-4 157168-49-5 157168-50-8  
 157168-51-9 160522-89-4 161374-52-3, Nonamidine 165596-46-3  
 166601-05-4 166601-10-1 166601-11-2 168637-58-9 173420-56-9  
 173420-58-1 173420-61-6 173420-63-8 179118-03-7 179118-04-8  
 179118-05-9 179118-08-2 179118-10-6 179118-22-0 186395-09-5  
 186395-18-6 186395-20-0 186395-22-2 186395-24-4 186395-25-5  
 186395-26-6 186395-28-8 186395-29-9 186395-30-2 190958-06-6  
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 216308-12-2 216308-13-3 216308-14-4 216308-16-6 216308-18-8  
 216502-98-6 216502-99-7 216503-00-3 216503-01-4 216503-02-5  
 216503-05-8 216503-06-9 216503-07-0 216503-08-1 216503-09-2  
 219483-82-6 232940-82-8, 2,8-Dibenzofurandicarbonitrile 232940-83-9  
 232940-84-0 247032-11-7 247032-13-9 247032-15-1 247032-16-2  
 247032-17-3 247032-18-4 338945-24-7, 2,8-Dibenzofurandicarboximidamide  
 415718-14-8 415718-17-1 415718-20-6 415718-26-2 415718-29-5  
 415718-32-0, 2,8-Dibenzothiophenedicarboximidamide 415718-35-3  
 415718-41-1, 3,7-Dibenzothiophenedicarboximidamide 415718-44-4  
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 648415-42-3 648415-43-4 648415-44-5 648415-45-6 648415-46-7  
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 648415-58-1 648415-59-2

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(benzimidazole compound-pentamidine compound combinations for the treatment  
 of neoplasms)

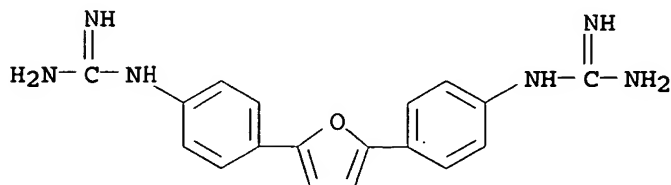
IT 442842-45-7 648415-34-3 648415-37-6  
 648415-38-7 648415-39-8 648415-40-1  
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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(benzimidazole compound-pentamidine compound combinations for the treatment  
 of neoplasms)

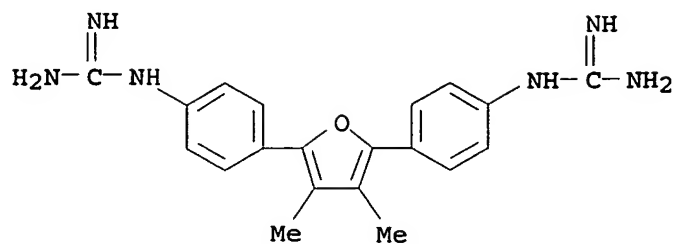
RN 442842-45-7 HCAPLUS

CN Guanidine, N,N''''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX  
 NAME)



RN 648415-34-3 HCAPLUS

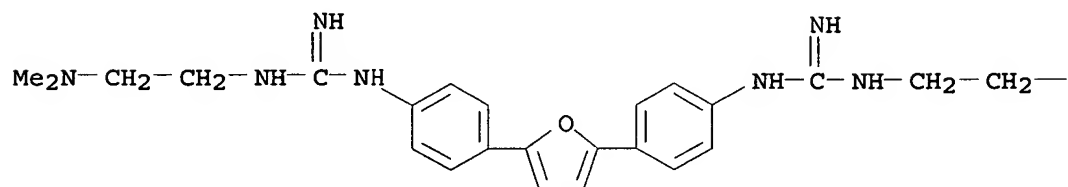
CN Guanidine, N,N''''-[(3,4-dimethyl-2,5-furandiyl)di-4,1-phenylene]bis- (9CI)  
 (CA INDEX NAME)



RN 648415-37-6 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(2-(dimethylamino)ethyl)- (9CI) (CA INDEX NAME)]

PAGE 1-A

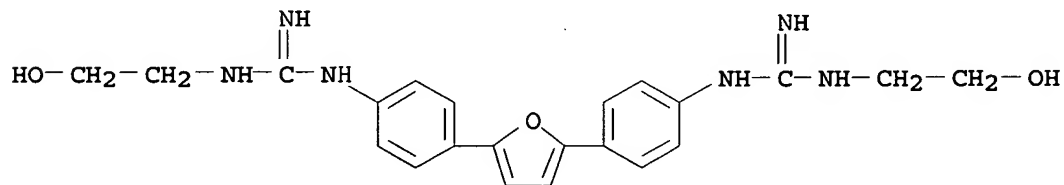


PAGE 1-B

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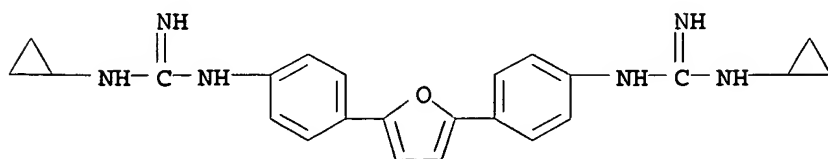
RN 648415-38-7 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)]



RN 648415-39-8 HCAPLUS

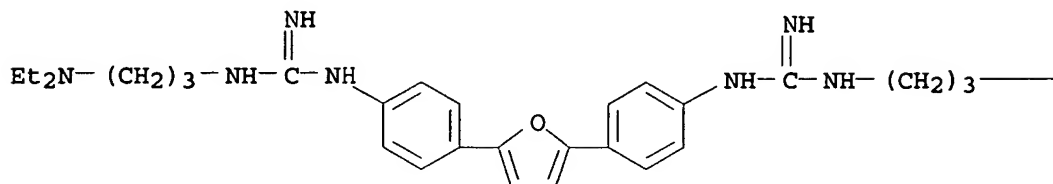
CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-cyclopropyl- (9CI) (CA INDEX NAME)]



RN 648415-40-1 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(3-(diethylamino)propyl)]- (9CI) (CA INDEX NAME)

PAGE 1-A

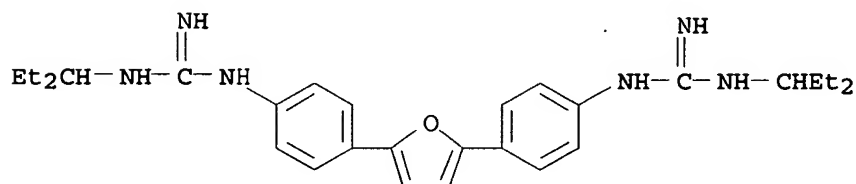


PAGE 1-B

—NEt<sub>2</sub>

RN 648415-41-2 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(1-ethylpropyl)]- (9CI) (CA INDEX NAME)



L12 ANSWER 10 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2004:60249 HCAPLUS

DN 140:122767

TI Pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms

IN Borisy, Alexis; Keith, Curtis; Foley, Michael A.; Stockwell, Brent R.; Gaw, Debra A.; Nichols, M. James; Lee, Margaret S.

PA Combinatorx, Incorporated, USA

SO PCT Int. Appl., 76 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2004006842	A2	20040122	WO 2003-US21803	20030711
	WO 2004006842	A3	20040527		
W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG,				

PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR,  
 TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY,  
 KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES,  
 FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,  
 BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2492059	AA	20040122	CA 2003-2492059	20030711
AU 2003256511	A1	20040202	AU 2003-256511	20030711
US 2004116407	A1	20040617	US 2003-617424	20030711
BR 2003012597	A	20050510	BR 2003-12597	20030711
EP 1545544	A2	20050629	EP 2003-764557	20030711

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CN 1681511	A	20051012	CN 2003-821151	20030711
JP 2005536509	T2	20051202	JP 2004-521730	20030711
NO 2005000204	A	20050408	NO 2005-204	20050113

PRAI US 2002-395233P P 20020711  
 WO 2003-US21803 W 20030711

OS MARPAT 140:122767

AB The invention features a method for treating a patient having a cancer or other neoplasm by administering to the patient pentamidine (or an analog thereof) and chlorpromazine (or an analog thereof) simultaneously or within 14 days of each other in amts. sufficient to treat the patient.

IC ICM A61K

CC 1-6 (Pharmacology)

ST pentamidine compd chlorpromazine compd combination neoplasm treatment; antitumor pentamidine compd chlorpromazine compd combination

IT Bone, neoplasm  
 (Ewing's sarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Sarcoma  
 (Ewing's; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Sarcoma  
 (Kaposi's; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Lymphoproliferative disorders  
 (Waldenstrom's macroglobulinemia; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Kidney, neoplasm  
 (Wilms'; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Nerve, neoplasm  
 (acoustic neuroma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Acute myeloid leukemia  
 (acute erythroblastic leukemia, acute; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
 Lung, neoplasm  
 Ovary, neoplasm  
 (adenocarcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Neuroglia, neoplasm  
 (astrocytoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Skin, neoplasm  
 (basal cell carcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma

(basal cell; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Biliary tract, neoplasm  
(bile duct, carcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(bladder; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(bronchial; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Bladder, neoplasm  
Bronchi, neoplasm  
Lung, neoplasm  
Sebaceous gland  
Sweat gland  
(carcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(cartilage chondrosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Uterus, neoplasm  
(cervix; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(choledochal; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Cartilage, neoplasm  
(chondrosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Neoplasm  
(chordoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
Chorion, neoplasm  
(choriocarcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Intestine, neoplasm  
(colon, carcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
Intestine, neoplasm  
(colon; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Neoplasm  
(craniopharyngioma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Ovary, neoplasm  
(cystadenocarcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(embryonal; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Brain, neoplasm  
(ependymoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(fibrosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Disease, animal

(heavy chain; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Blood vessel, neoplasm  
(hemangioblastoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Blood vessel, neoplasm  
Sarcoma  
(hemangiosarcoma, lymphangiosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Blood vessel, neoplasm  
Sarcoma  
(hemangiosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(hepatocellular; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Liver, neoplasm  
(hepatoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(inhalants; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(injections, i.m.; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(injections, i.v.; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Lung, neoplasm  
(large-cell carcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Myoma  
Sarcoma  
(leiomyosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Adipose tissue, neoplasm  
Sarcoma  
(liposarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(lymphangioendotheliosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(medullary; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Brain, neoplasm  
(medulloblastoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Nervous system, neoplasm  
(meningioma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Mesothelium, neoplasm  
(mesothelioma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Sarcoma  
(myxosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Astrocyte  
(neoplasm, astrocytoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Notochord  
(neoplasm, chordoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Meninges  
(neoplasm, meningioma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Oligodendrocyte  
(neoplasm, oligodendroglioma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Schwann cell  
(neoplasm, schwannoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Nerve, neoplasm  
(neuroblastoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Lymphoma  
(non-Hodgkin's; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Neuroglia, neoplasm  
(oligodendroglioma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Drug delivery systems  
(oral; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Bone, neoplasm  
Sarcoma  
(osteosarcoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(ovarian adenocarcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(ovarian cystadenocarcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Thyroid gland, neoplasm  
(papillary carcinoma, adenocarcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Thyroid gland, neoplasm  
(papillary carcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Acute lymphocytic leukemia  
Acute monocytic leukemia  
Acute myeloid leukemia  
Acute myelomonocytic leukemia  
Acute promyelocytic leukemia  
Angiogenesis inhibitors  
Antitumor agents  
Carcinoma  
Chemotherapy  
Chronic lymphocytic leukemia  
Chronic myeloid leukemia  
Cytotoxic agents  
Drug delivery systems  
Drug interactions  
Gene therapy  
Hodgkin's disease  
Human  
Immunotherapy  
Leukemia  
Leukemia

Lung, neoplasm  
Mammary gland, neoplasm  
Melanoma  
Neoplasm  
Neuroglia, neoplasm  
Ovary, neoplasm  
Pancreas, neoplasm  
Polycythemia vera  
Prostate gland, neoplasm  
Radiotherapy  
Surgery  
Testis, neoplasm  
Uterus, neoplasm  
    (pentamidine compound-chlorpromazine compound combinations for the  
    treatment of neoplasms)

IT Pineal gland  
    (pinealoma; pentamidine compound-chlorpromazine compound combinations for  
    the treatment of neoplasms)

IT Carcinoma  
    (pulmonary adenocarcinoma; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Carcinoma  
    (pulmonary large-cell; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Carcinoma  
    (pulmonary small-cell; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Carcinoma  
    (pulmonary squamous cell; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Carcinoma  
    (pulmonary; pentamidine compound-chlorpromazine compound combinations for  
    the treatment of neoplasms)

IT Drug delivery systems  
    (rectal; pentamidine compound-chlorpromazine compound combinations for the  
    treatment of neoplasms)

IT Kidney, neoplasm  
    (renal cell carcinoma; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Carcinoma  
    (renal cell; pentamidine compound-chlorpromazine compound combinations for  
    the treatment of neoplasms)

IT Eye, neoplasm  
    (retinoblastoma; pentamidine compound-chlorpromazine compound combinations  
    for the treatment of neoplasms)

IT Sarcoma  
    (rhabdomyosarcoma; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Nervous system, neoplasm  
    (schwannoma; pentamidine compound-chlorpromazine compound combinations for  
    the treatment of neoplasms)

IT Testis, neoplasm  
    (seminoma; pentamidine compound-chlorpromazine compound combinations for  
    the treatment of neoplasms)

IT Lung, neoplasm  
    (small-cell carcinoma; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Lung, neoplasm  
    (squamous cell carcinoma; pentamidine compound-chlorpromazine compound  
    combinations for the treatment of neoplasms)

IT Carcinoma  
(squamous cell; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Neoplasm  
(synovioma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(thyroid papillary, adenocarcinoma; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT Carcinoma  
(thyroid papillary; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

IT 95725-91-0 141436-78-4, Protein kinase C 300865-11-6, Protein tyrosine phosphatase 1B  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(inhibitors; pentamidine compound-chlorpromazine compound combinations for the treatment of neoplasms)

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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(pentamidine compound-chlorpromazine compound combinations for the  
treatment of neoplasms)

IT 61-00-7, Acepromazine

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(pentamidine compound-chlorpromazine compound combinations for treatment of  
neoplasms)

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648415-38-7 648415-39-8 648415-40-1

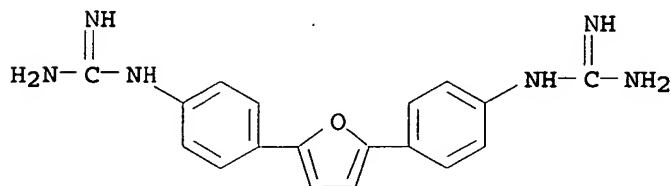
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RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(pentamidine compound-chlorpromazine compound combinations for the  
treatment of neoplasms)

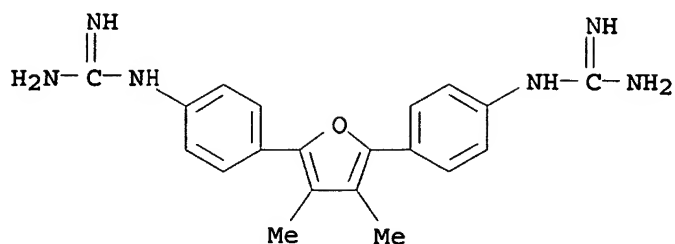
RN 442842-45-7 HCAPLUS

CN Guanidine, N,N''''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX  
NAME)



RN 648415-34-3 HCAPLUS

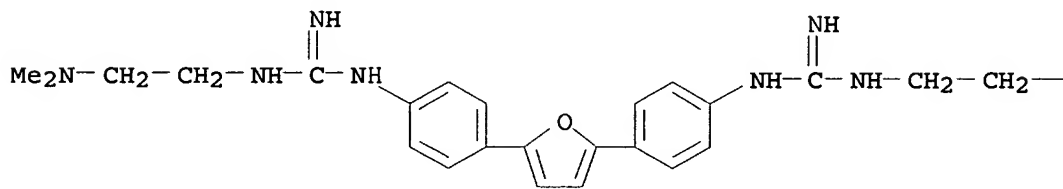
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(CA INDEX NAME)



RN 648415-37-6 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(2-(dimethylamino)ethyl)- (9CI) (CA INDEX NAME)]

PAGE 1-A

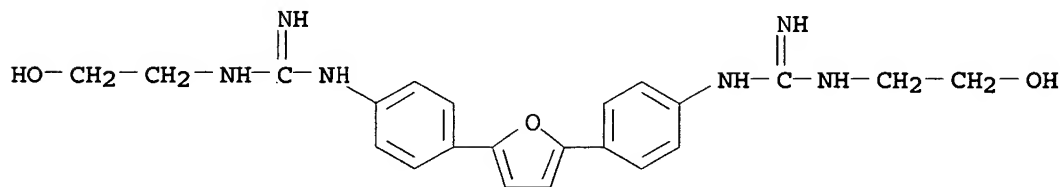


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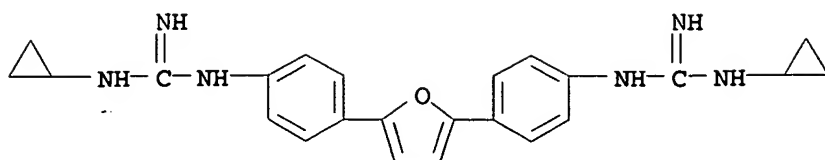
RN 648415-38-7 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(2-hydroxyethyl)- (9CI) (CA INDEX NAME)]



RN 648415-39-8 HCAPLUS

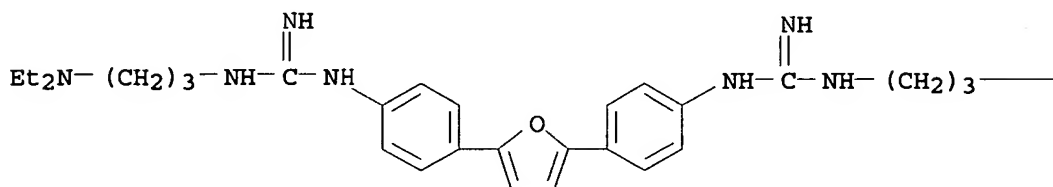
CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-cyclopropyl- (9CI) (CA INDEX NAME)]



RN 648415-40-1 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(3-(diethylamino)propyl)]-(9CI) (CA INDEX NAME)

PAGE 1-A

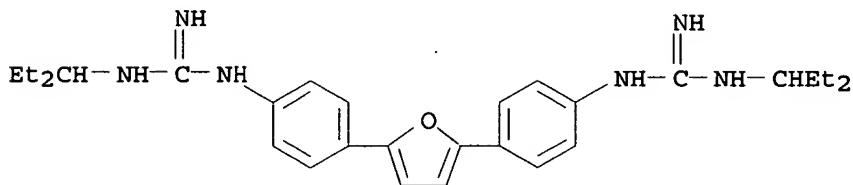


PAGE 1-B

—NEt<sub>2</sub>

RN 648415-41-2 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis[N'-(1-ethylpropyl)]-(9CI) (CA INDEX NAME)



L12 ANSWER 11 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:991295 HCAPLUS

DN 140:35966

TI Amidine derivatives for treating amyloidosis and neurodegenerative diseases

IN Chalifour, Robert J.; Kong, Xianqi; Wu, Xinfu; Lu, Wenshuo; Tidwell, Richard R.; Boykin, David

PA University of North Carolina At Chapel Hill, USA; Georgia State University Research Foundation, Inc.

SO PCT Int. Appl., 92 pp.

CODEN: PIXXD2

DT Patent

LA English

## FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003103598	A2	20031218	WO 2003-US17992	20030609
	WO 2003103598	A3	20060309		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2488493	AA	20031218	CA 2003-2488493	20030609
	AU 2003251418	A1	20031222	AU 2003-251418	20030609
	EP 1572129	A2	20050914	EP 2003-757414	20030609
	R:	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK			
	JP 2006501160	T2	20060112	JP 2004-510719	20030609
	US 2004147531	A1	20040729	US 2003-731463	20031205
PRAI	US 2002-387001P	P	20020607		
	US 2001-316761P	P	20010831		
	US 2002-234643	A1	20020903		
	WO 2003-US17992	W	20030609		
AB	The present invention relates to the use of amidine compds. in the treatment of amyloid related diseases. In particular, the invention relates to a method of treating or preventing an amyloid-related disease in a subject comprising administering to the subject a therapeutic amount of an amidine compound Among the compds. for use according to the invention are those according to the following Formulas, such that, when administered, amyloid fibril formation, neurodegeneration, or cellular toxicity is reduced or inhibited.				
IC	ICM A61K				
CC	1-11 (Pharmacology)				
	Section cross-reference(s): 28				
ST	amidine deriv prepn amyloidosis neurodegenerative disease treatment				
IT	Brain, disease (amyloid angiopathy; preparation of amidine derivs. for treating amyloidosis and neurodegenerative diseases)				
IT	Blood vessel, disease (diabetic angiopathy; preparation of amidine derivs. for treating amyloidosis and neurodegenerative diseases)				
IT	Diabetes mellitus (non-insulin-dependent; preparation of amidine derivs. for treating amyloidosis and neurodegenerative diseases)				
IT	Alzheimer's disease Amyloidosis Anti-Alzheimer's agents (preparation of amidine derivs. for treating amyloidosis and neurodegenerative diseases)				
IT	500713-83-7P 500713-91-7P 500713-94-0P RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of amidine derivs. for treating amyloidosis and neurodegenerative diseases)				
IT	100-33-4	140-64-7	1670-14-0	2498-50-2	6275-69-0
	26130-55-2	28718-90-3	29148-07-0	34415-16-2	47165-04-8

50357-45-4 50357-46-5 50357-47-6 50357-48-7 50357-53-4  
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 125880-53-7 125880-82-2 129051-01-0 129051-04-3 147125-43-7  
 148344-27-8 152294-33-2 152294-34-3 159395-00-3 160522-87-2  
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 500715-35-5 500715-36-6 500715-37-7 500715-38-8 500715-39-9  
 500715-40-2 500715-41-3 634601-53-9 634905-88-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
 (Biological study); USES (Uses)

(preparation of amidine derivs. for treating amyloidosis and  
 neurodegenerative diseases)

IT 110-60-1, 1,4-Diaminobutane 111-24-0, 1,5-Dibromopentane 123-08-0,  
 4-Hydroxybenzaldehyde 462-94-2, 1,5-Diaminopentane 767-00-0,  
 4-Cyanophenol 1194-02-1, 4-Fluorobenzonitrile 4421-08-3,  
 4-Hydroxy-3-methoxybenzonitrile 4549-31-9, 1,7-Dibromoheptane  
 6068-72-0, 4-Cyanobenzoyl chloride 7467-71-2 14191-95-8,  
 4-Hydroxybenzyl cyanide 21658-95-7, Diisopropyl (cyanomethyl)phosphonate  
 50816-19-8, 8-Bromooctanol 55362-80-6, 9-Bromononanol 141716-84-9  
 152120-54-2 304863-53-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of amidine derivs. for treating amyloidosis and  
 neurodegenerative diseases)

IT 77355-01-2P 112441-27-7P 125880-63-9P 500715-50-4P 500715-51-5P  
 500715-52-6P 500715-53-7P 500715-54-8P 500715-57-1P 500715-58-2P  
 634601-57-3P 634601-58-4P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
 (Reactant or reagent)

(preparation of amidine derivs. for treating amyloidosis and  
 neurodegenerative diseases)

IT 634601-55-1P 634601-56-2P

RL: SPN (Synthetic preparation); PREP (Preparation)

(preparation of amidine derivs. for treating amyloidosis and  
 neurodegenerative diseases)

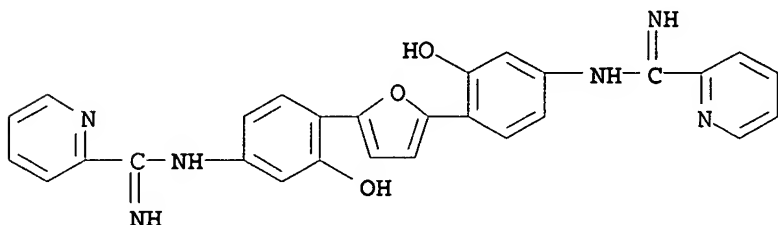
IT 423165-21-3 500714-96-5 500715-04-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL

(Biological study); USES (Uses)  
(preparation of amidine derivs. for treating amyloidosis and neurodegenerative diseases)

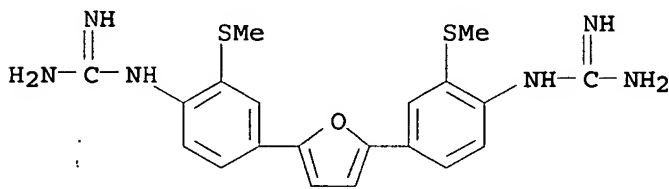
RN 423165-21-3 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-hydroxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



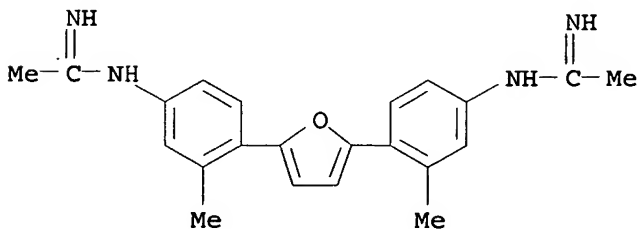
RN 500714-96-5 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[2-(methylthio)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



RN 500715-04-8 HCAPLUS

CN Ethanimidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



L12 ANSWER 12 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:941016 HCAPLUS

DN 141:33346

TI Inhibition of in vitro intracellular growth of Trypanosoma cruzi by dicationic compounds

AU Rowland, Edwin C.; Moore-Lai, Deborah; Seed, John R.; Stephens, Chad E.; Boykin, David W.

CS Biomedical Sciences Department, College of Osteopathic Medicine, Ohio University, Athens, OH, 45701, USA

SO Journal of Parasitology (2003), 89(5), 1078-1080

CODEN: JOPAA2; ISSN: 0022-3395

PB American Society of Parasitologists

DT Journal  
LA English  
AB Dicationic compds., which are derivs. of pentamidine, are being developed for use as antiprotozoal drugs. These compds. bind to the minor groove of DNA and are thought to inhibit DNA-dependent enzymes and thereby prevent cellular replication by protozoans. The objective of this study was to test the ability of a group of these compds. to inhibit the intracellular and extracellular reproduction of *Trypanosoma cruzi* in vitro. At present, there are few drugs in use capable of inhibiting the intracellular stages of this parasite, and therefore compds. with this ability would be of value. Cultures of mouse fibroblasts were infected and treated with doses of dicationic compds., and the nos. of parasites released at the end of the 5-to 7-day growth cycle were determined. Five of the compds. tested were found to be effective at inhibiting *T. cruzi* growth at doses that were not toxic to the host cells. The compound found most effective (DB709) inhibited parasite release at the low concentration of 0.8 ng/mL, justifying further study. These results suggest that dicationic compds. may have potential as chemotherapy against *T. cruzi* infection.

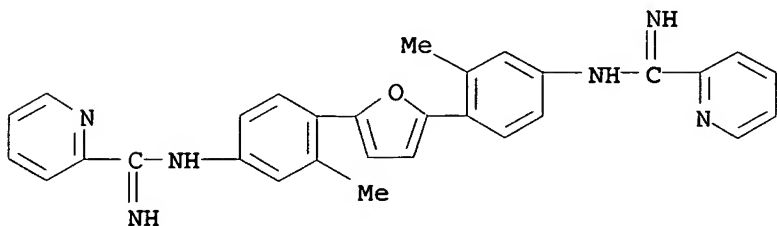
CC 1-5 (Pharmacology)  
ST cationic compd antimicrobial Trypanosoma growth  
IT Infection  
(Chagas' disease; inhibition of in vitro intracellular growth of *Trypanosoma cruzi* by dicationic compds.)

IT Growth, microbial  
Protozoacides  
*Trypanosoma cruzi*  
(inhibition of in vitro intracellular growth of *Trypanosoma cruzi* by dicationic compds.)

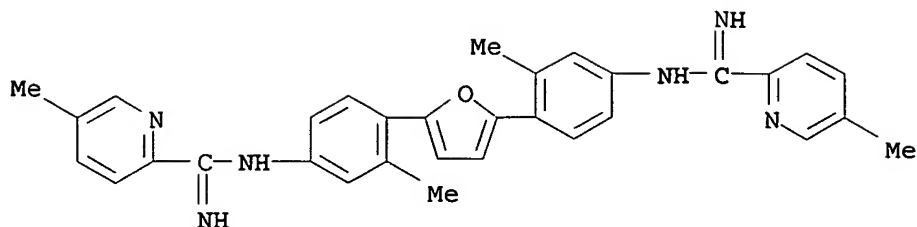
IT 347191-09-7, DB 702 347191-14-4, DB 710  
347191-16-6, DB 709 347191-18-8, DB 712  
423165-12-2, DB 713 701979-67-1, DB 745  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(inhibition of in vitro intracellular growth of *Trypanosoma cruzi* by dicationic compds.)

IT 347191-09-7, DB 702 347191-14-4, DB 710  
347191-16-6, DB 709 347191-18-8, DB 712  
423165-12-2, DB 713 701979-67-1, DB 745  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(inhibition of in vitro intracellular growth of *Trypanosoma cruzi* by dicationic compds.)

RN 347191-09-7 HCAPLUS  
CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

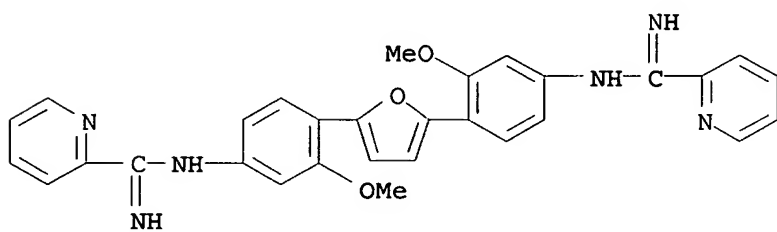


RN 347191-14-4 HCAPLUS  
CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis[5-methyl- (9CI) (CA INDEX NAME)



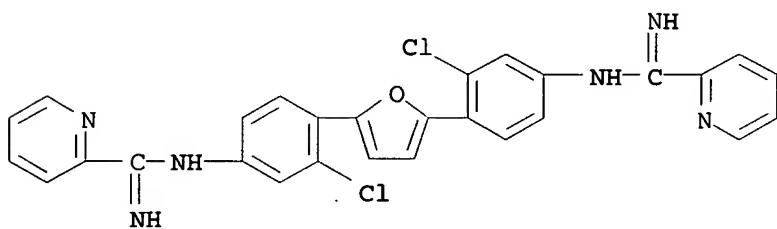
RN 347191-16-6 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N' '-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



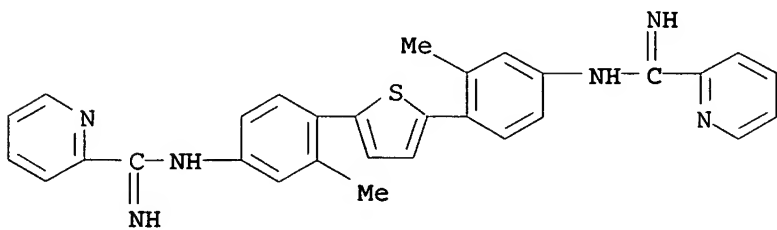
RN 347191-18-8 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N' '-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



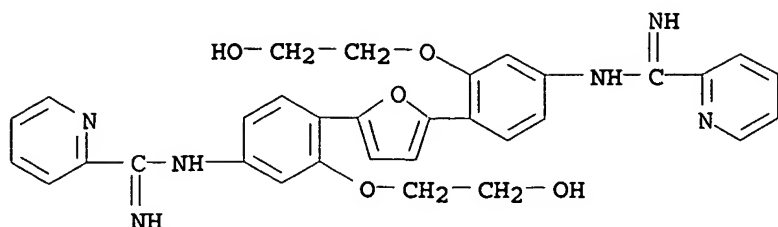
RN 423165-12-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N' '-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 701979-67-1 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N' '-[2,5-furandiylbis[3-(2-hydroxyethoxy)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 13 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:831312 HCAPLUS

DN 141:225237

TI Part i. synthesis of n-substituted 2,5-bis-[4-guanidinophenyl]thiophenes as potential antileishmanial compounds. part ii. synthesis of novel potential prodrugs of bis-guanidino and bis-amidino molecules

AU Gonzalez-Roman, Jose Luis

CS Georgia State Univ., Experiment, GA, USA

SO (2002) 95 pp. Avail.: UMI, Order No. DA3075422

From: Diss. Abstr. Int., B 2003, 63(12), 5849

DT Dissertation

LA English

AB Unavailable

CC 27-8 (Heterocyclic Compounds (One Hetero Atom))

ST guanidinophenyl thiophene synthesis leishmanial inhibitor; prodrug potential bisguanidine bisamidine

IT Functional groups

(bisamidine; synthesis of novel potential prodrugs of bis-guanidino and bis-amidino mols.)

IT Infection

(leishmaniasis; synthesis of N-substituted 2,5-bis-[4-guanidinophenyl]thiophenes as potential antileishmanial compds.)

IT Drug delivery systems

(prodrugs; synthesis of novel potential prodrugs of bis-guanidino and bis-amidino mols.)

IT 423165-31-5DP, derivative

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(synthesis of N-substituted 2,5-bis-[4-guanidinophenyl]thiophenes as potential antileishmanial compds.)

IT 113-00-8DP, Guanidine, bis- derivs.

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(synthesis of novel potential prodrugs of bis-guanidino and bis-amidino mols.)

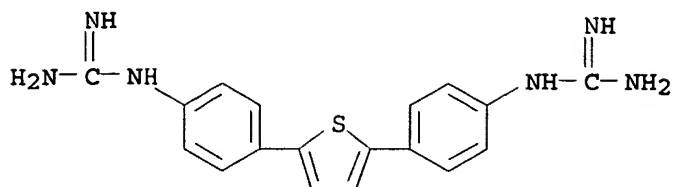
IT 423165-31-5DP, derivative

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)

(synthesis of N-substituted 2,5-bis-[4-guanidinophenyl]thiophenes as potential antileishmanial compds.)

RN 423165-31-5 HCAPLUS

CN Guanidine, N,N'''-(2,5-thiophenediylldi-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



L12 ANSWER 14 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:513253 HCAPLUS

DN 139:390750

TI Detection of inhibition of bovine viral diarrhea virus by aromatic cationic molecules

AU Givens, M. Daniel; Dykstra, Christine C.; Brock, Kenny V.; Stringfellow, David A.; Kumar, Arvind; Stephens, Chad E.; Goker, Hakan; Boykin, David W.

CS Department of Pathobiology, College of Veterinary Medicine, Auburn University, Auburn, AL, 36849, USA

SO Antimicrobial Agents and Chemotherapy (2003), 47(7), 2223-2230  
CODEN: AMACQ; ISSN: 0066-4804

PB American Society for Microbiology

DT Journal

LA English

OS CASREACT 139:390750

AB Bovine viral diarrhea virus (BVDV) is an economically significant pathogen of cattle and a problematic contaminant in the laboratory BVDV is often used as

an in vitro model for hepatitis C virus during drug discovery efforts. Aromatic dicationic mols. have exhibited inhibitory activity against several RNA viruses. Thus, the purpose of this research was to develop and apply a method for screening the aromatic cationic compds. for in vitro cytotoxicity and activity against a noncytopathic strain of BVDV. The screening method evaluated the concentration of BVDV in medium and cell lysates after 72 h of cell culture in the presence of either a 25 or 5  $\mu$ M concentration of the test compound Five of 93 screened compds. were selected

for further determination of inhibitory (90 and 50%) and cytotoxic (50 and 10%) concentration

endpoints. The screening method identified compds. that exhibited inhibition of BVDV at nanomolar concns. while exhibiting no cytotoxicity at 25  $\mu$ M concns. The leading compds. require further investigation to determine their mechanism of action, in vivo activity, and specific activity against hepatitis C virus.

CC 1-5 (Pharmacology)

Section cross-reference(s): 27, 28

ST bovine viral diarrhea virus inhibition arom cationic compd

IT Antiviral agents

Bovine diarrhea virus

Cytotoxicity

(inhibition of bovine viral diarrhea virus by aromatic cationic mols.)

IT 73819-26-8 73819-28-0 80498-71-1 179118-06-0 186953-56-0  
216308-19-9 216308-21-3 216308-23-5 332421-59-7 423165-11-1  
423165-19-9 423165-25-7 423165-27-9  
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625459-73-6 625459-75-8 625459-77-0 625459-79-2 625459-80-5

625459-82-7 625459-84-9 625459-86-1 625459-88-3

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(inhibition of bovine viral diarrhea virus by aromatic cationic mols.)

IT 442842-52-6

RL: RCT (Reactant); RACT (Reactant or reagent)

(inhibition of bovine viral diarrhea virus by aromatic cationic mols.)

IT 423165-28-0P 442842-40-2P 625459-41-8P 625459-43-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)(preparation of aromatic cationic mols. as inhibitors of bovine viral  
diarrhea virus)IT 106-51-4, 1,4-Benzoquinone, reactions 610-38-8, 3,4-Dinitrobromobenzene  
7147-77-5, 5-(4-Nitrophenyl)furfural 193361-76-1, 2,5-  
Bis(tributylstannyl)furan 625458-94-8

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of aromatic cationic mols. as inhibitors of bovine viral  
diarrhea virus)

IT 57279-70-6P 423165-37-1P 423165-50-8P 625458-97-1P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)(preparation of aromatic cationic mols. as inhibitors of bovine viral  
diarrhea virus)

IT 423165-11-1 423165-19-9 423165-25-7

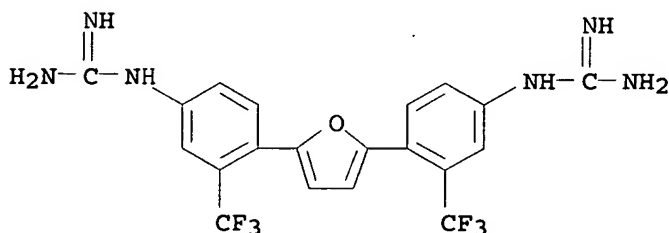
423165-27-9 423165-30-4 423165-62-2

442842-50-4

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

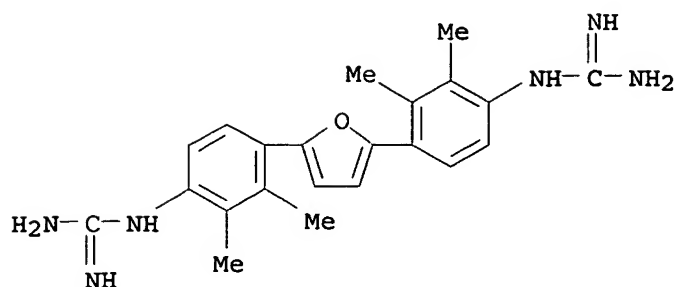
(inhibition of bovine viral diarrhea virus by aromatic cationic mols.)

RN 423165-11-1 HCAPLUS

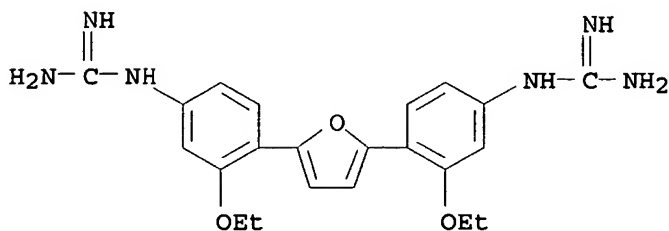
CN Guanidine, N,N'''-[2,5-furandiylbis[3-(trifluoromethyl)-4,1-phenylene]]bis-  
(9CI) (CA INDEX NAME)

RN 423165-19-9 HCAPLUS

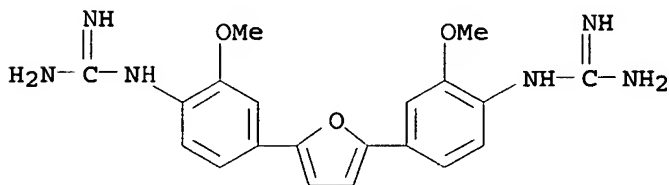
CN Guanidine, N,N'''-[2,5-furandiylbis(2,3-dimethyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)



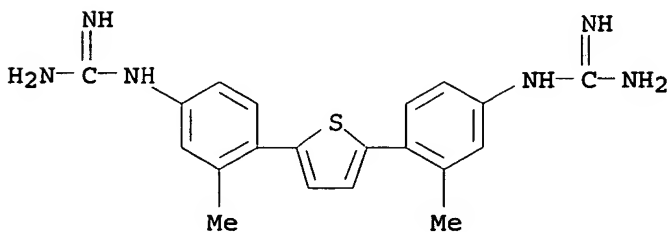
RN 423165-25-7 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-ethoxy-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

RN 423165-27-9 HCAPLUS

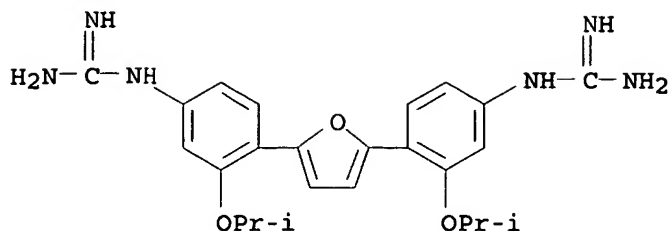
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(CA INDEX NAME)

RN 423165-30-4 HCAPLUS

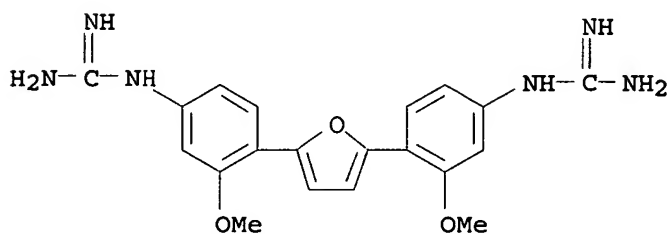
CN Guanidine, N,N'''-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

RN 423165-62-2 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis-  
(9CI) (CA INDEX NAME)



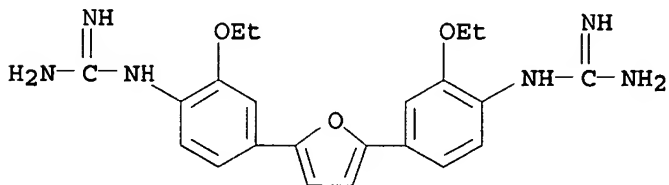
RN 442842-50-4 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

IT 423165-28-0P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);  
USES (Uses)(preparation of aromatic cationic mols. as inhibitors of bovine viral  
diarrhea virus)

RN 423165-28-0 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(2-ethoxy-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)RE.CNT 46 THERE ARE 46 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 15 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:405950 HCAPLUS

DN 139:194248

TI The activity of diguanidino and 'reversed' diamidino 2,5-diarylfurans  
versus Trypanosoma cruzi and Leishmania donovaniAU Stephens, Chad E.; Brun, Reto; Salem, Manar M.; Werbovetz, Karl A.;  
Tanious, Farial; Wilson, W. David; Boykin, David W.CS Department of Chemistry, Georgia State University, Atlanta, GA,  
30303-3083, USA

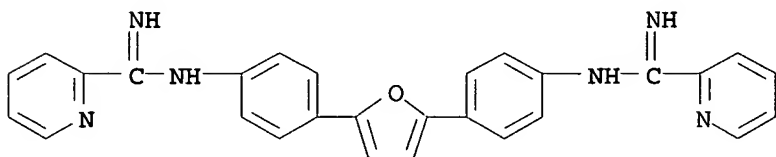
- SO Bioorganic & Medicinal Chemistry Letters (2003), 13(12), 2065-2069  
CODEN: BMCLE8; ISSN: 0960-894X
- PB Elsevier Science B.V.
- DT Journal
- LA English
- AB The in vitro activity of 20 dicationic mols. containing either diguanidino or reversed amidine cationic groups were evaluated vs. Trypanosoma cruzi and Leishmania donovani. The most active compds. were in the reversed amidine series and six exhibited IC50 values of less than 1  $\mu$ mol vs. T. cruzi and five gave similar values vs. L. donovani.
- CC 10-5 (Microbial, Algal, and Fungal Biochemistry)  
Section cross-reference(s): 1, 27
- ST diguanidino diamidino diarylfuran prepn protozoacide structure;  
Trypanosoma inhibition diguanidino diamidino diarylfuran structure;  
Leishmania inhibition diguanidino diamidino diarylfuran structure
- IT Structure-activity relationship  
(DNA-binding; activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)
- IT Leishmania donovani  
Trypanosoma cruzi  
Trypanosomicides  
(activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)
- IT DNA  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)
- IT Protozoacides  
(leishmanicides; activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)
- IT Structure-activity relationship  
(protozoacidal; activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)
- IT Infection  
(protozoal; activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)
- IT 347190-99-2P 347191-09-7P 347191-16-6P  
347191-18-8P 423165-10-0P 423165-11-1P  
423165-18-8P 423165-19-9P 423165-27-9P  
423165-28-0P 423165-29-1P 423165-62-2P  
442842-45-7P 442842-49-1P 442842-50-4P  
500714-96-5P 585571-89-7P 585571-90-0P  
585571-91-1P  
RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)
- IT 107819-90-9 193361-76-1 585571-88-6  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)

IT 347190-99-2P 347191-09-7P 347191-16-6P  
347191-18-8P 423165-10-0P 423165-11-1P  
423165-18-8P 423165-19-9P 423165-27-9P  
423165-28-0P 423165-29-1P 423165-62-2P  
442842-45-7P 442842-49-1P 442842-50-4P  
500714-96-5P 585571-89-7P 585571-90-0P  
585571-91-1P

RL: ADV (Adverse effect, including toxicity); PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(activity of diguanidino and 'reversed' diamidino diarylfurans vs. Trypanosoma cruzi and Leishmania donovani in relation to DNA binding and cytotoxicity)

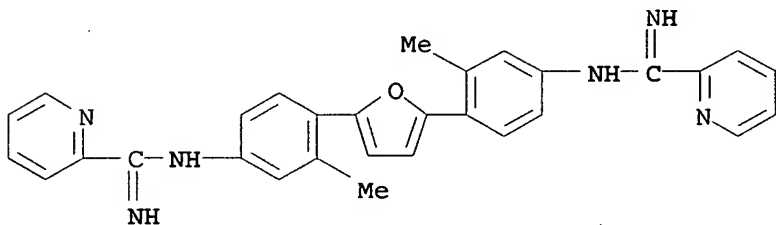
RN 347190-99-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI)  
(CA INDEX NAME)



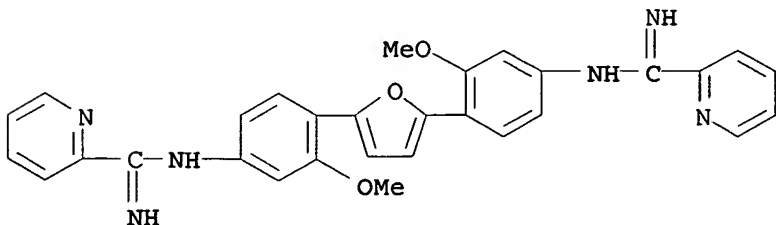
RN 347191-09-7 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



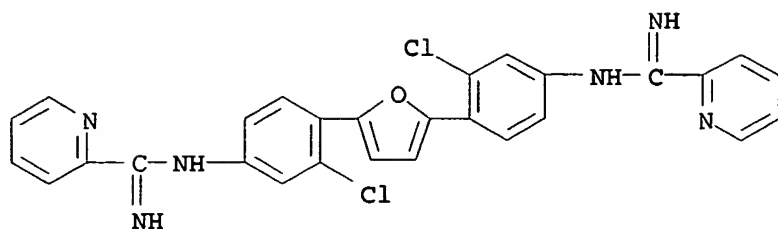
RN 347191-16-6 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

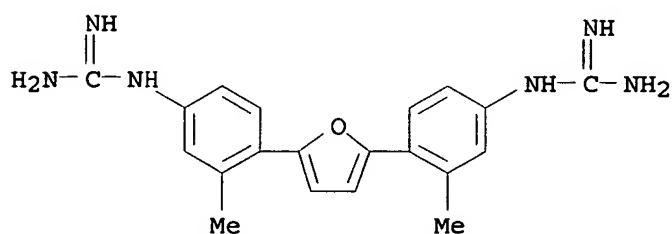


RN 347191-18-8 HCAPLUS

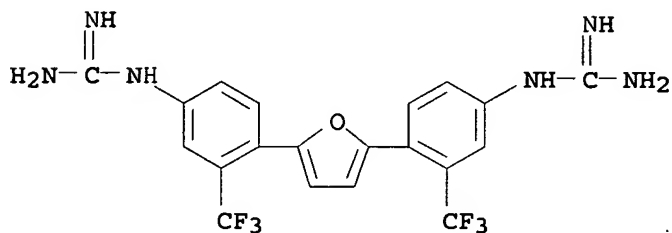
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 423165-10-0 HCAPLUS

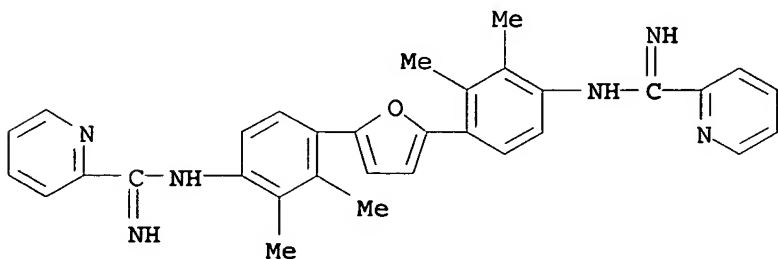
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

RN 423165-11-1 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[3-(trifluoromethyl)-4,1-phenylene]]bis-  
(9CI) (CA INDEX NAME)

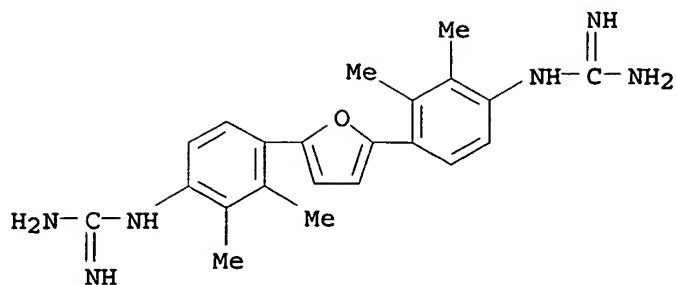
RN 423165-18-8 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'''-[2,5-furandiylbis(2,3-dimethyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

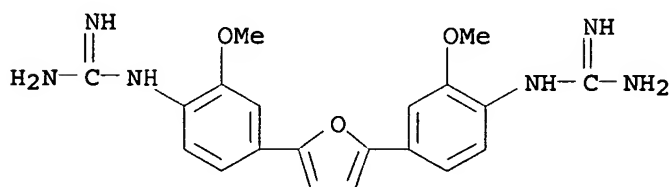


RN 423165-19-9 HCAPLUS

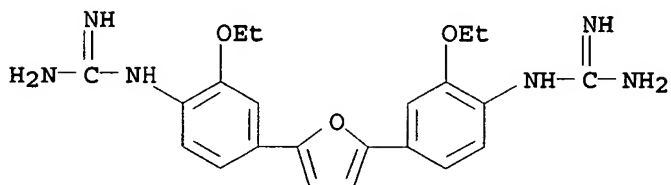
CN Guanidine, N,N'''-[2,5-furandiylbis(2,3-dimethyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)



RN 423165-27-9 HCAPLUS

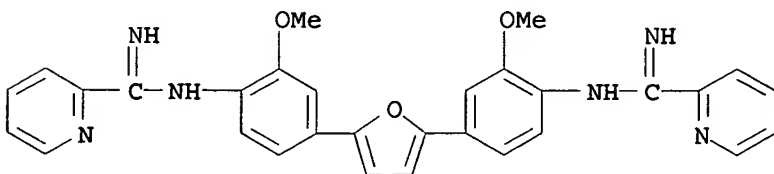
CN Guanidine, N,N'''-[2,5-furandiylbis(2-methoxy-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

RN 423165-28-0 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(2-ethoxy-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

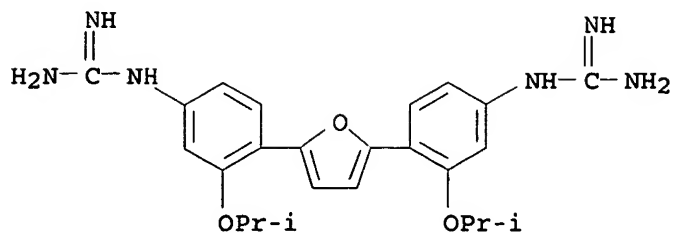
RN 423165-29-1 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(2-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



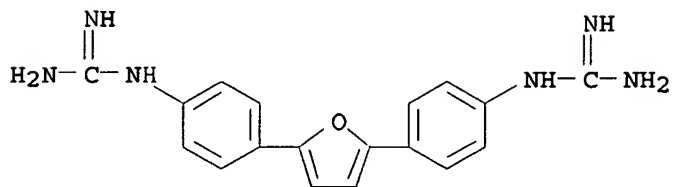
RN 423165-62-2 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



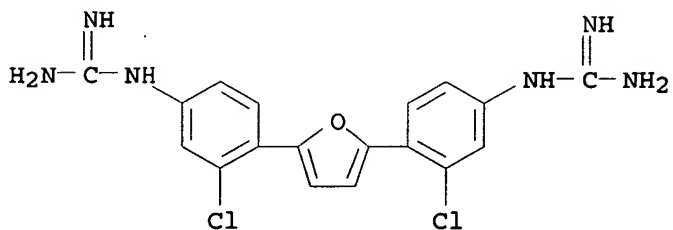
RN 442842-45-7 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



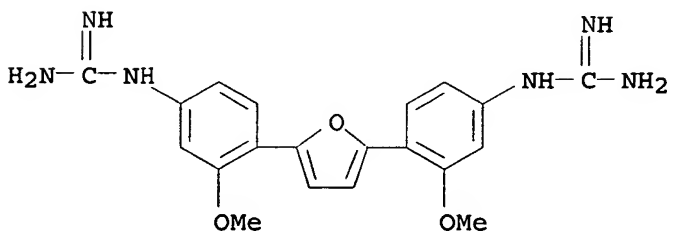
RN 442842-49-1 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



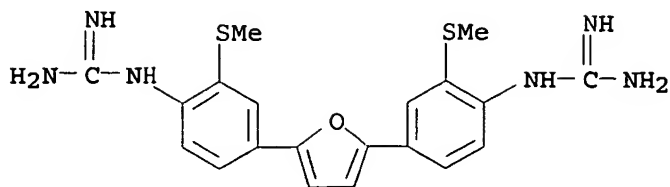
RN 442842-50-4 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

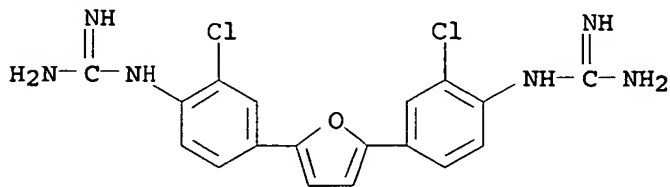


RN 500714-96-5 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(2-(methylthio)-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

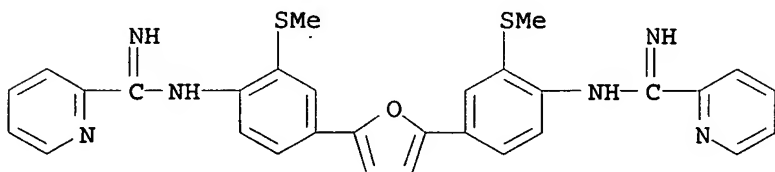


RN 585571-89-7 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(2-chloro-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

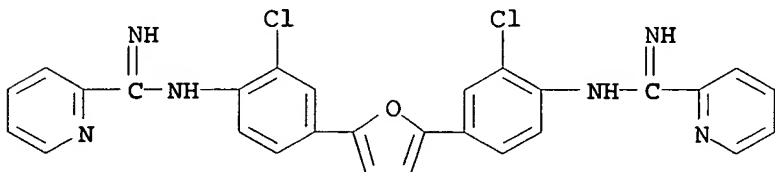
RN 585571-90-0 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'''-[2,5-furandiylbis[2-(methylthio)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



RN 585571-91-1 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'''-[2,5-furandiylbis(2-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)

RE.CNT 40 THERE ARE 40 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 16 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:173414 HCAPLUS

DN 138:215350

TI Amidine derivatives for treating amyloid-related diseases

IN Chalifour, Robert J.; Kong, Xianqi; Wu, Xinfu; Lu, Wenshuo

PA Neurochem Inc., Can.

SO PCT Int. Appl., 114 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2003017994	A1	20030306	WO 2002-CA1353	20020903
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW				
	RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
	CA 2455497	AA	20030306	CA 2002-2455497	20020903
	US 2004006092	A1	20040108	US 2002-234643	20020903
	EP 1420773	A1	20040526	EP 2002-758012	20020903
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
	BR 2002012078	A	20040928	BR 2002-12078	20020903
	JP 2005504053	T2	20050210	JP 2003-522514	20020903
	CN 1658852	A	20050824	CN 2002-815770	20020903
	US 2004147531	A1	20040729	US 2003-731463	20031205
	NO 2004000497	A	20040414	NO 2004-497	20040204
PRAI	US 2001-316761P	P	20010831		
	US 2002-387001P	P	20020607		
	US 2002-234643	A1	20020903		
	WO 2002-CA1353	W	20020903		

OS MARPAT 138:215350

AB The invention discloses the use of amidine compds. in the treatment of amyloid-related diseases (e.g. Alzheimer's disease, Down's syndrome, type II diabetes). In particular, the invention discloses a method for treating or preventing an amyloid-related disease in a subject comprising administering to the subject a therapeutic amount of an amidine compound. The compds. of the invention (Markush included) are such that, when administered, reduce or inhibit amyloid fibril formation, neurodegeneration, or cellular toxicity. Compound preparation is described.

IC ICM A61K031-155

CC 1-12 (Pharmacology)

ST Section cross-reference(s): 25, 28

amyloid disease treatment amidine deriv prepn; Alzheimer disease treatment amidine deriv; Down syndrome diabetes treatment amidine deriv; fibril amyloid inhibition amidine deriv; neurodegeneration cell toxicity inhibition amyloid disease treatment amidine deriv

IT Peptides, biological studies

RL: BSU (Biological study, unclassified); BIOL (Biological study)

(A $\beta$ (1-40); amidine derivs. for treating amyloid-related diseases)

IT Alzheimer's disease

Anti-Alzheimer's agents

Antidiabetic agents

Cognition

Cognition enhancers

Cognitive disorders

Cytoprotective agents

Cytotoxicity

Down's syndrome

Drug delivery systems

Human  
(amidine derivs. for treating amyloid-related diseases)

IT Amyloid  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(amidine derivs. for treating amyloid-related diseases)

IT Amidines  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(amidine derivs. for treating amyloid-related diseases)

IT Brain, disease  
(amyloid angiopathy; amidine derivs. for treating amyloid-related  
diseases)

IT Nerve, disease  
(degeneration; amidine derivs. for treating amyloid-related diseases)

IT Organelle  
(fibril, amyloid fibril formation inhibition; amidine derivs. for  
treating amyloid-related diseases)

IT Myositis  
(inclusion body; amidine derivs. for treating amyloid-related diseases)

IT Cytoprotective agents  
(neuroprotective; amidine derivs. for treating amyloid-related  
diseases)

IT Diabetes mellitus  
(non-insulin-dependent; amidine derivs. for treating amyloid-related  
diseases)

IT Amyloid  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
( $\beta$ -; amidine derivs. for treating amyloid-related diseases)

IT 159395-00-3  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(2amidine derivs. for treating amyloid-related diseases)

IT 106602-62-4, Islet amyloid polypeptide  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(amidine derivs. for treating amyloid-related diseases)

IT 6275-69-0P 50357-45-4P 50357-46-5P 50357-47-6P 50357-48-7P  
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RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES  
(Uses)  
(amidine derivs. for treating amyloid-related diseases)

IT 100-33-4 140-64-7 1670-14-0 2498-50-2 22265-37-8 26130-55-2  
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500715-48-0 500715-49-1

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(amidine derivs. for treating amyloid-related diseases)

IT 107-15-3, Ethylenediamine, reactions 110-52-1, 1,4-Dibromobutane  
110-60-1, 1,4-Diaminobutane 111-24-0, 1,5-Dibromopentane 123-08-0,  
4-Hydroxybenzaldehyde 462-94-2, 1,5-Diaminopentane 767-00-0,  
4-Cyanophenol 1194-02-1, 4-Fluorobenzonitrile 4421-08-3 4549-31-9,  
1,7-Dibromoheptane 5470-11-1, Hydroxylamine hydrochloride 6068-72-0,  
4-Cyanobenzoyl chloride 7664-41-7, Ammonia, reactions 14191-95-8,  
4-Hydroxybenzylcyanide 21658-95-7, Diisopropyl(cyanomethyl)phosphonate  
50816-19-8, 8-Bromooctanol 55362-80-6, 9-Bromononanol 112441-27-7  
141716-84-9 152120-54-2 500715-51-5

RL: RCT (Reactant); RACT (Reactant or reagent)

(amidine derivs. for treating amyloid-related diseases)

IT 1246-12-4P 1248-95-9P 7467-71-2P 7476-06-4P 50381-94-7P  
77355-01-2P 94291-61-9P 125880-63-9P 132400-81-8P 224054-32-4P  
500715-52-6P 500715-53-7P 500715-54-8P 500715-55-9P 500715-56-0P  
500715-57-1P 500715-58-2P 500715-59-3P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)

(amidine derivs. for treating amyloid-related diseases)

IT 500715-50-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(amidine derivs. for treating amyloid-related diseases)

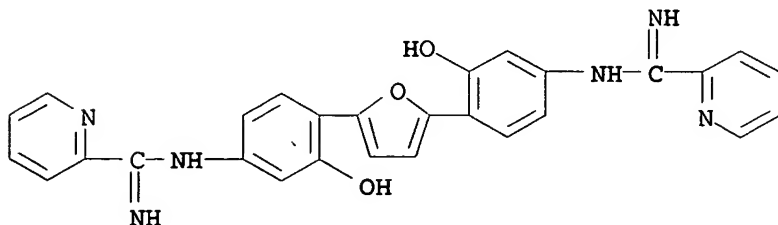
IT 423165-21-3 500714-96-5 500715-04-8

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)

(amidine derivs. for treating amyloid-related diseases)

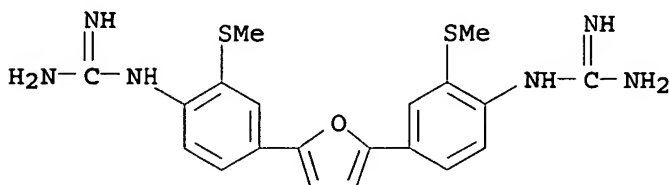
RN 423165-21-3 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-hydroxy-4,1-  
phenylene)]bis- (9CI) (CA INDEX NAME)



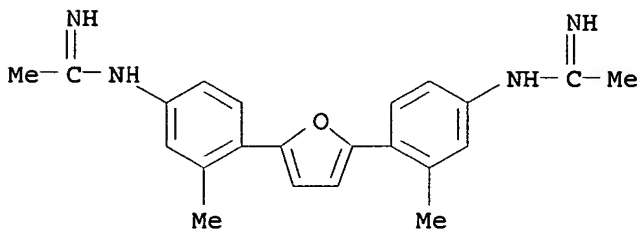
RN 500714-96-5 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[2-(methylthio)-4,1-phenylene]]bis-  
(9CI) (CA INDEX NAME)



RN 500715-04-8 HCAPLUS

CN Ethanimidamide, N,N'''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)



RE.CNT 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 17 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2003:10892 HCAPLUS

DN 139:30167

TI Distribution of furamidine analogues in tumor cells: targeting of the  
nucleus or mitochondria depending on the amidine substitution

AU Lansiaux, Amelie; Tanious, Farial; Mishal, Zohar; Dassonneville, Laurent;  
Kumar, Arvind; Stephens, Chad E.; Hu, Qiyue; Wilson, W. David; Boykin,  
David W.; Bailly, Christian

CS Institut National de la Sante et de la Recherche Medicale U-524 et  
Laboratoire de Pharmacologie Antitumorale du Centre Oscar Lambret, Lille,  
59045, Fr.

SO Cancer Research (2002), 62(24), 7219-7229  
CODEN: CNREA8; ISSN: 0008-5472

PB American Association for Cancer Research

DT Journal

LA English

AB Diphenylfuran diamidines represent an important class of DNA minor groove  
binders of high therapeutic interest as antiparasitic or antitumor agents  
depending on the compds. structures. To exert their cytotoxic action, the  
compds. must first get into the cell and reach the nuclear compartment  
where the main target, DNA, is located. The forces that drive the drugs  
into cell nuclei, as well as the influence of the mol. structures on the  
cell distribution, are not known. To address these issues, we took  
advantage of the fluorescence of the mols. to analyze their intracellular  
distribution profiles in tumor cells of different origins (B16 melanoma,  
MCF7 mammary adenocarcinoma, A549 lung carcinoma, HT29 colon carcinoma,  
LNCaP, and PC3 prostatic carcinoma) by epifluorescence and confocal  
microscopy. A homogeneous series of synthetic bis-substituted alkyl or Ph  
amidine and reverse amidine derivs. of furamidine was used to dissect the

mol. mechanisms that control the distribution of the drugs into the cytoplasm or the nucleus of the cells. The amidine (DB75) and the various N-alkyl derivs. were found to accumulate selectively in the cell nuclei. This is also the case for a guanidine derivative but not for the phenyl-substituted compound DB569, which essentially localizes in cytoplasmic granules. Similar cytoplasmic patterns were observed with a reverse amidine analog and a pyridine-substituted compound indicating that the presence of aromatic rings on the terminal side chain is the limiting factor that restricts the uptake of the compds. in the nuclear compartment. The use of different organelle-selective fluorescent probes, such as JC-1 and chloromethyl-X-rosamine, both specific to mitochondria and neutral red considered as a lysosome-selective probe, suggests that DB569 preferentially accumulates in mitochondria. Competition expts. with the antitumor drug daunomycin reveal that the diphenylfurans are attracted into the nuclei by the DNA. The DNA minor groove-drug interactions provide the driving force that permits massive accumulation of the fluorescent mols. in the nuclei. The DNA binding properties of the diphenylfuran derivs. were investigated by DNase I footprinting and surface plasmon resonance biosensor expts. to measure sequence selectivity and binding affinities, resp. Furamidine and its phenyl-substituted analog that accumulate in the cell nuclei and mitochondria, resp., share a common selectivity for AT sites and bind equally tightly to these sites. Therefore, it is possible to modulate the intracellular distribution of the furamidine derivs. without affecting their DNA binding and sequence recognition properties. The introduction of aromatic substituents on diphenylfuran diamidines represents a novel strategy to control the intracellular compartmentalization of these DNA binding agents and directs them to mitochondria. This drug design strategy may prove useful to trigger drug-induced apoptosis.

## CC 1-3 (Pharmacology)

ST furamidine analog structure tumor nucleus mitochondria targeting DNA binding

IT Mammary gland, neoplasm

(adenocarcinoma; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Lung, neoplasm

Prostate gland, neoplasm

(carcinoma; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Intestine, neoplasm

(colon, carcinoma; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Carcinoma

(colon; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Biological transport

(intracellular; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Carcinoma

(mammary adenocarcinoma; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Carcinoma

(prostatic; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Carcinoma

(pulmonary; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Antitumor agents

Cell nucleus

Drug design  
Drug targets  
Human  
Melanoma  
Mitochondria  
Neoplasm  
Structure-activity relationship  
(targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT DNA  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT Cytotoxicity  
(targeting of furamidine analogs to the nucleus or mitochondria of tumor cells in relation to cytotoxicity)

IT 173420-56-9, DB 181  
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(DB 181; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT 179118-17-3, DB 226  
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(DB 226; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT 192525-51-2, DB 244  
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(DB 244; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

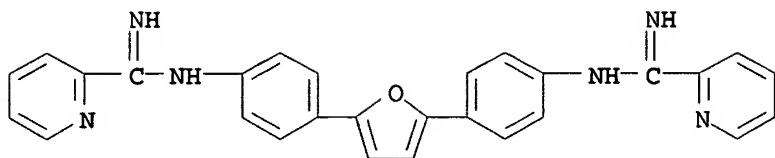
IT 73819-26-8, DB 75  
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(DB 75; targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

IT 192525-52-3, DB 249 199919-00-1, DB 417 347190-99-2, DB 667  
347191-02-0, DB 613 442842-45-7, DB 673 541520-55-2, DB 569  
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

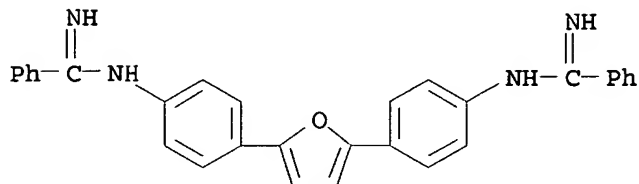
IT 347190-99-2, DB 667 347191-02-0, DB 613  
442842-45-7, DB 673  
RL: PAC (Pharmacological activity); PKT (Pharmacokinetics); PRP (Properties); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(targeting of furamidine analogs to the nucleus or mitochondria of tumor cells as a function of structure and DNA binding)

RN 347190-99-2 HCAPLUS

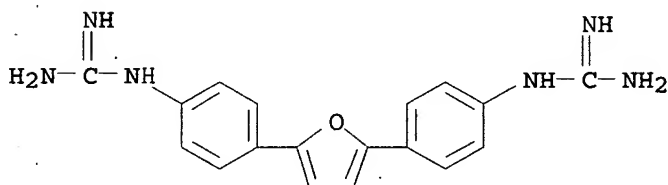
CN 2-Pyridinecarboximidamide, N,N''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI)  
(CA INDEX NAME)



RN 347191-02-0 HCAPLUS

CN Benzenecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI)  
(CA INDEX NAME)

RN 442842-45-7 HCAPLUS

CN Guanidine, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX  
NAME)RE.CNT 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD  
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 18 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:555455 HCAPLUS

DN 137:109199

TI Preparation of bis(amidino- and guanidinophenyl)furans and analogs as  
microbicidesIN Boykin, David; Tidwell, Richard R.; Wilson, W. David; Perfect, John R.;  
Stephens, Chad E.PA University of North Carolina at Chapel Hill, USA; Georgia State University  
Research Foundation, Inc.

SO PCT Int. Appl., 36 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002057224	A2	20020725	WO 2001-US47238	20011106
	WO 2002057224	A3	20030306		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,  
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,

*applicants*

GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM  
 RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2002156098	A1	20021024	US 2001-985590	20011105
US 6706754 *	B2	20040316		
CA 2425135	AA	20020725	CA 2001-2425135	20011106
US 2003083362	A1	20030501	US 2001-8535	20011106
US 6737440	B2	20040518		
EP 1337510	A2	20030827	EP 2001-994174	20011106
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
JP 2004517889	T2	20040617	JP 2002-557905	20011106
US 2004235927	A1	20041125	US 2004-791425	20040302
PRAI US 2000-246244P	P	20001106		
US 2000-246330P	P	20001107		
US 2001-288428P	P	20010504		
US 2001-8535	A3	20011106		
WO 2001-US47238	W	20011106		
OS	MARPAT 137:109199			
AB	Z[Z1NHC(:NR5)R6]2 [I; R5 = H, alkyl, aryl; R6 = H, alkyl, aryl, NR7R8; R7,R8 = H, alkyl, aryl; Z = furan-, thiophene-, or pyrrole-2,5-diyl; Z1 = (un)substituted 1,4-phenylene] were prepared Thus, 2,5-bis(tributylstannyl)furan was condensed with 2-bromo-5-nitrotoluene and the product reduced to give 2,5-bis(4-amino-2-methylphenyl)furan. Similarly prepared 2,5-bis(4-aminophenyl)furan was amidated by BzCl and the product converted in 2 steps to I (R5 = H, R6 = Ph, Z = furan-2,5-diyl, Z1 = 1,4-phenylene). Data for biol. activity of I were given.			
IC	ICM C07D			
CC	27-6 (Heterocyclic Compounds (One Hetero Atom))			
	Section cross-reference(s): 1			
ST	amidinophenylfuran prepn microbicide; bactericide amidinophenylfuran prepn; fungicide amidinophenylfuran prepn; protozoacide amidinophenylfuran prepn			
IT	Aspergillus Candida albicans Cryptococcus neoformans Cryptosporidium parvum Fusarium solani Giardia lamblia Mycobacterium tuberculosis Plasmodium (malarial genus) Pneumocystis carinii Toxoplasma gondii Trypanosoma (infection; treatment; preparation of bis(amidino- and guanidinophenyl)furans and analogs as microbicides)			
IT	Antibacterial agents Fungicides Human Protozoacides (preparation of bis(amidino- and guanidinophenyl)furans and analogs as microbicides)			
IT	347190-93-6P 347190-94-7P 347190-95-8P 347190-96-9P 347190-97-0P 347190-98-1P 347190-99-2P 347191-00-8P 347191-02-0P 347191-03-1P 347191-04-2P 347191-05-3P			

347191-06-4P 347191-07-5P 347191-08-6P  
347191-09-7P 347191-11-1P 347191-14-4P  
347191-15-5P 347191-16-6P 347191-17-7P  
347191-18-8P 347191-19-9P 347191-20-2P  
347191-21-3P 423165-09-7P 423165-12-2P  
423165-54-2P 443797-77-1P 443797-78-2P  
443797-79-3P 443797-80-6P 443797-81-7P  
443797-83-9P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);

USES (Uses)

(preparation of bis(amidino- and guanidinophenyl)furans and analogs as  
microbicides)

IT 98-88-4, Benzoyl chloride 100-70-9, 2-Cyanopyridine 874-60-2,  
4-Methylbenzoyl chloride 939-26-4, 2-(Bromomethyl)naphthalene  
1620-77-5, 2-Cyano-5-methylpyridine 7149-70-4, 2-Bromo-5-nitrotoluene  
193361-76-1, 2,5-Bis(tributylstannyl)furan

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of bis(amidino- and guanidinophenyl)furans and analogs as  
microbicides)

IT 5346-38-3P, 2-Thiocarbamoylpyridine 53715-17-6P 56297-30-4P,  
2,5-Bis(4-nitrophenyl)furan 251577-90-9P 334017-98-0P 347190-78-7P  
347190-79-8P 347190-80-1P 347190-81-2P 347190-82-3P 347190-83-4P  
347190-84-5P 347190-85-6P 347190-86-7P 347190-87-8P  
347190-88-9P 347190-89-0P 347190-90-3P  
347190-91-4P 347190-92-5P 347191-01-9P 347191-10-0P  
347191-22-4P 347191-23-5P 347191-24-6P 347191-25-7P 443797-82-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(preparation of bis(amidino- and guanidinophenyl)furans and analogs as  
microbicides)

IT 347190-93-6P 347190-94-7P 347190-95-8P  
347190-96-9P 347190-97-0P 347190-98-1P  
347190-99-2P 347191-00-8P 347191-02-0P  
347191-03-1P 347191-04-2P 347191-05-3P  
347191-06-4P 347191-07-5P 347191-08-6P  
347191-09-7P 347191-11-1P 347191-14-4P  
347191-15-5P 347191-16-6P 347191-17-7P  
347191-18-8P 347191-19-9P 347191-20-2P  
347191-21-3P 423165-09-7P 423165-12-2P  
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443797-83-9P

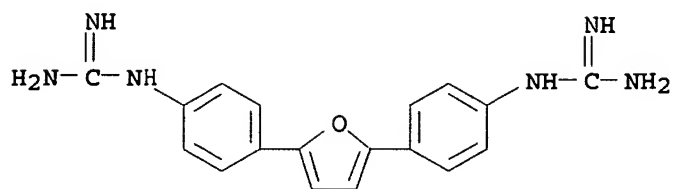
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
(Therapeutic use); BIOL (Biological study); PREP (Preparation);

USES (Uses)

(preparation of bis(amidino- and guanidinophenyl)furans and analogs as  
microbicides)

RN 347190-93-6 HCAPLUS

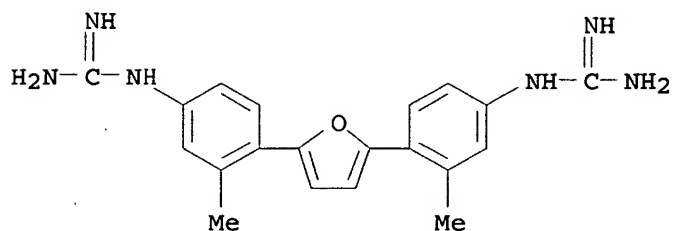
CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis-, dihydrochloride  
(9CI) (CA INDEX NAME)



●2 HCl

RN 347190-94-7 HCAPLUS

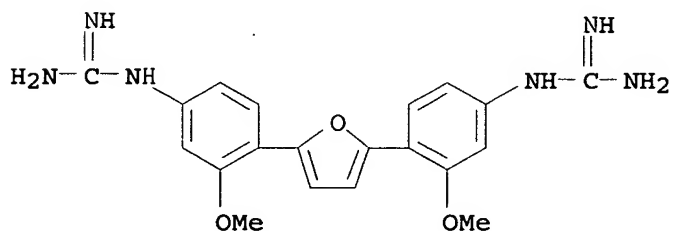
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-95-8 HCAPLUS

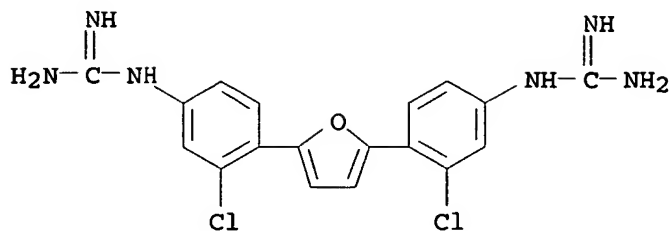
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-96-9 HCAPLUS

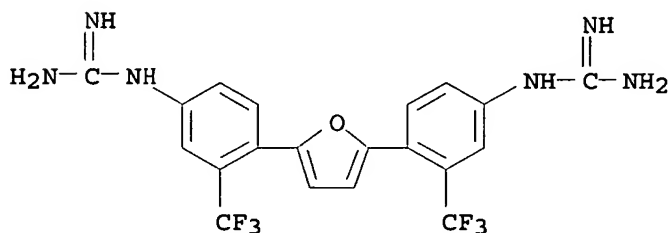
CN Guanidine, N,N'''-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 347190-97-0 HCAPLUS

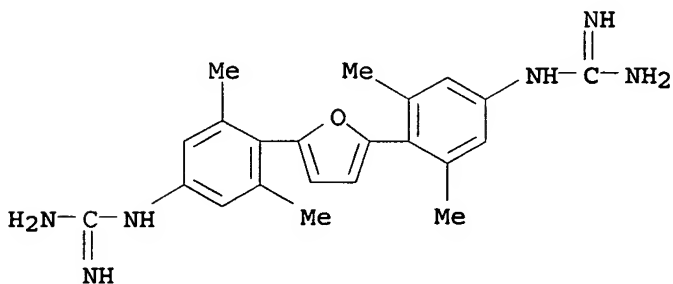
CN Guanidine, N,N'''-[2,5-furandiylbis[3-(trifluoromethyl)-4,1-phenylene]]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 347190-98-1 HCAPLUS

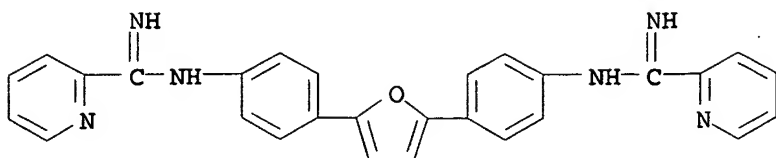
CN Guanidine, N,N'''-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



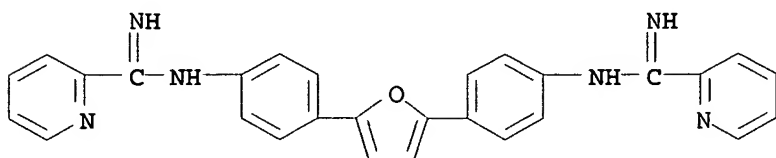
● 2 HCl

RN 347190-99-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)

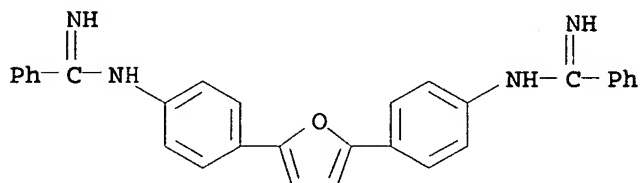


RN 347191-00-8 HCAPLUS

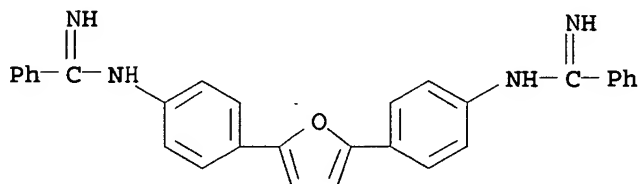
CN 2-Pyridinecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-,  
hydrochloride (2:7) (9CI) (CA INDEX NAME)

●7/2 HCl

RN 347191-02-0 HCAPLUS

CN Benzenecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI)  
(CA INDEX NAME)

RN 347191-03-1 HCAPLUS

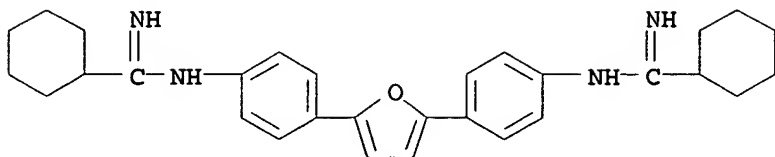
CN Benzenecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-,  
dihydrochloride (9CI) (CA INDEX NAME)

●2 HCl

RN 347191-04-2 HCAPLUS

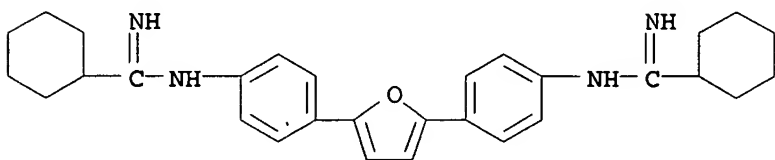
CN Cyclohexanecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-

(9CI) (CA INDEX NAME)



RN 347191-05-3 HCAPLUS

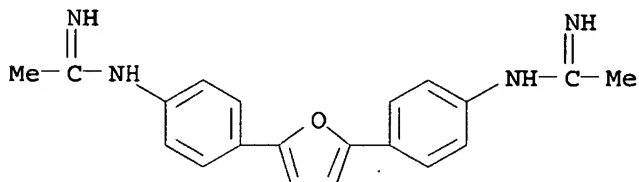
CN Cyclohexanecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-06-4 HCAPLUS

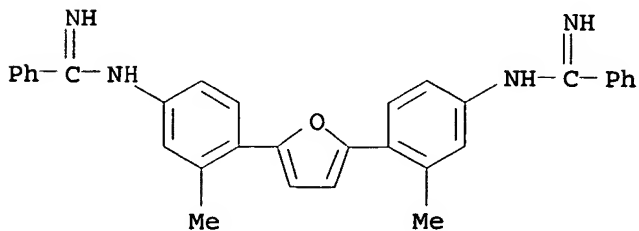
CN Ethanimidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-, dihydrobromide (9CI) (CA INDEX NAME)



●2 HBr

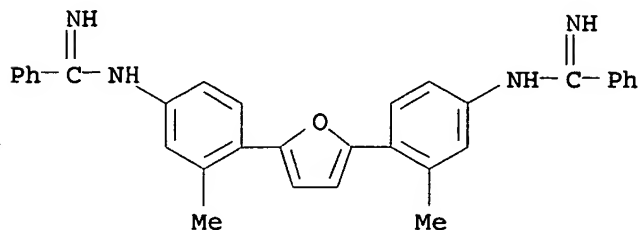
RN 347191-07-5 HCAPLUS

CN Benzenecarboximidamide, N,N'-(2,5-furandiylbis(3-methyl-4,1-phenylene))bis- (9CI) (CA INDEX NAME)



RN 347191-08-6 HCAPLUS

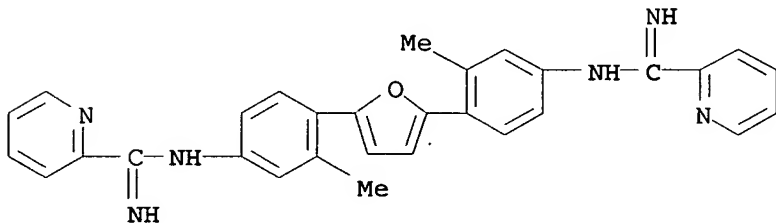
CN Benzenecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

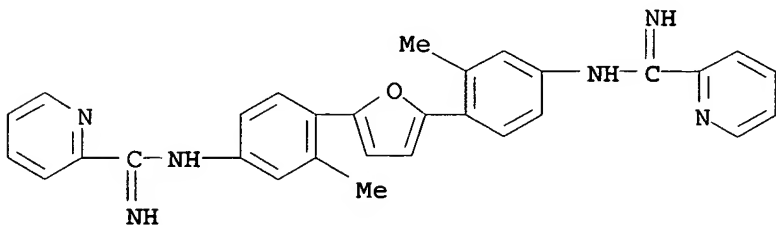
RN 347191-09-7 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 347191-11-1 HCAPLUS

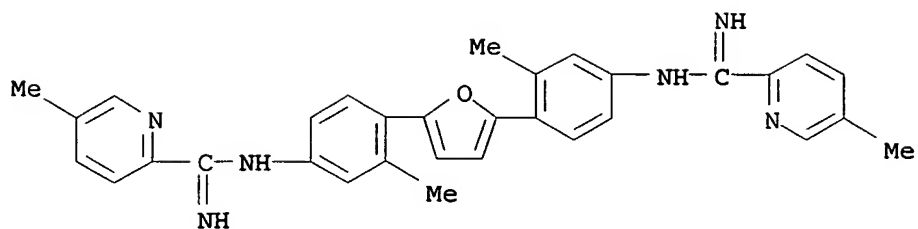
CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, hydrochloride (2:7) (9CI) (CA INDEX NAME)



●7/2 HCl

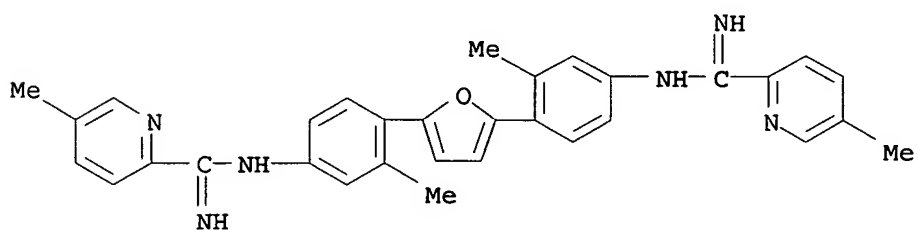
RN 347191-14-4 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis[5-methyl- (9CI) (CA INDEX NAME)



RN 347191-15-5 HCAPLUS

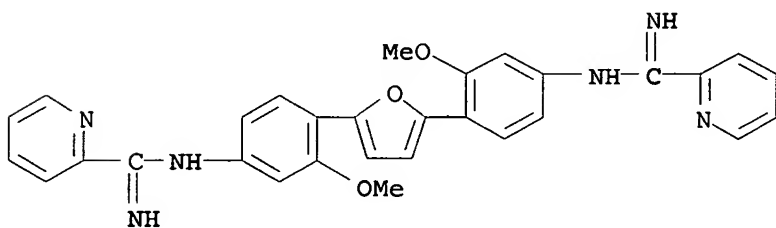
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis[5-methyl-, hydrochloride (4:13) (9CI) (CA INDEX NAME)



●13/4 HCl

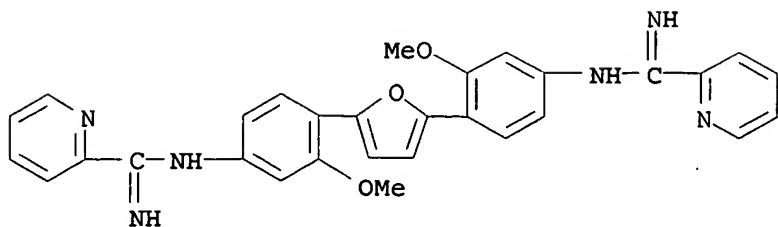
RN 347191-16-6 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 347191-17-7 HCAPLUS

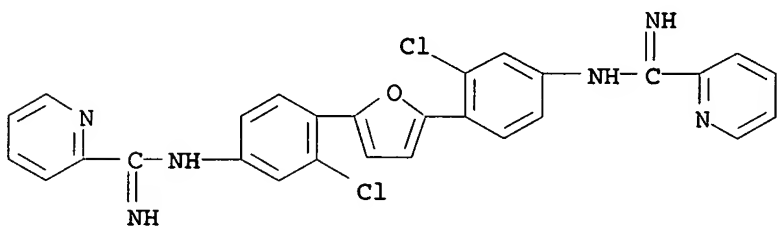
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

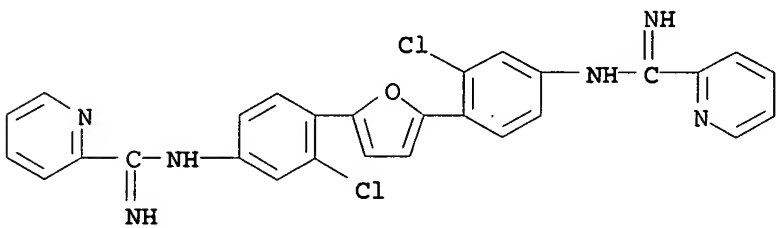
RN 347191-18-8 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N' '-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 347191-19-9 HCAPLUS

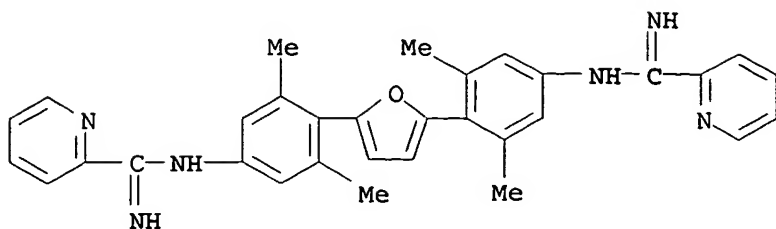
CN 2-Pyridinecarboximidamide, N,N' '-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

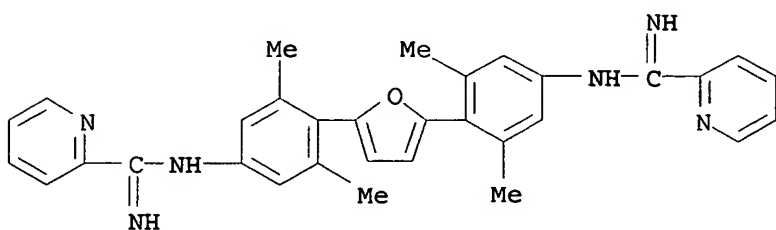
RN 347191-20-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N' '-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 347191-21-3 HCAPLUS

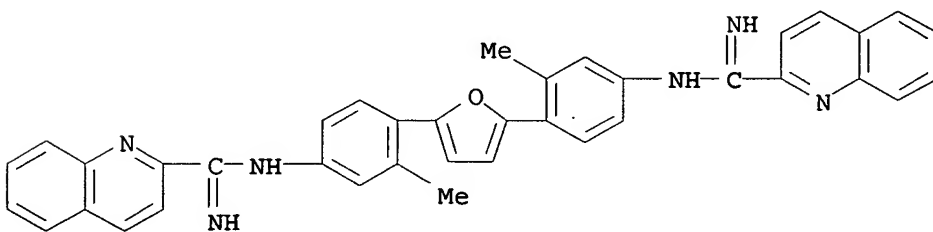
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis-, hydrochloride (4:15) (9CI) (CA INDEX NAME)



●15/4 HCl

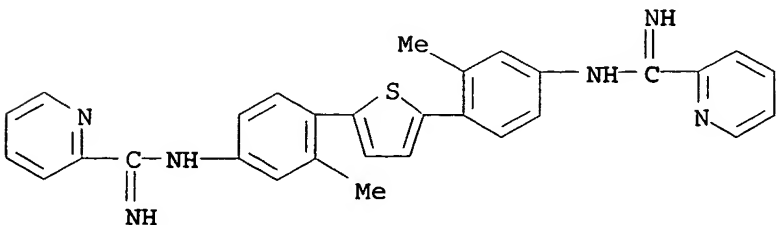
RN 423165-09-7 HCAPLUS

CN 2-Quinolinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



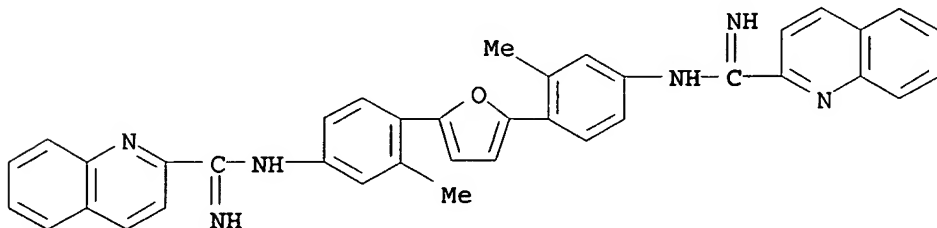
RN 423165-12-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 423165-54-2 HCAPLUS

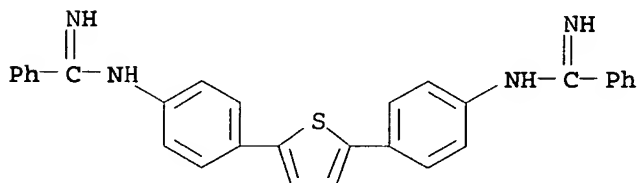
CN 2-Quinolinescarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

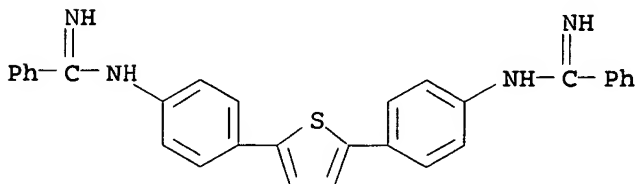
RN 443797-77-1 HCAPLUS

CN Benzenecarboximidamide, N,N''-(2,5-thiophenediylldi-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



RN 443797-78-2 HCAPLUS

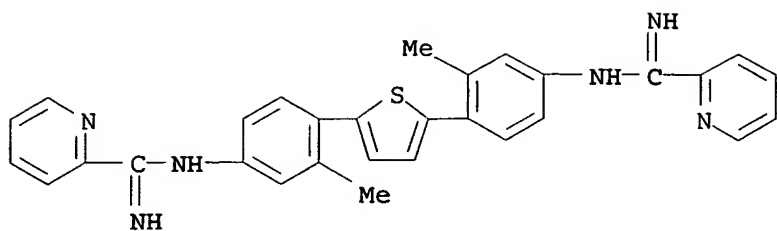
CN Benzenecarboximidamide, N,N''-(2,5-thiophenediylldi-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 443797-79-3 HCAPLUS

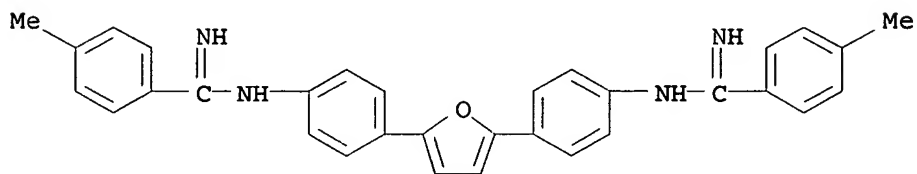
CN 2-Pyridinecarboximidamide, N,N''-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis-, hydrochloride (2:5) (9CI) (CA INDEX NAME)



● 5/2 HCl

RN 443797-80-6 HCAPLUS

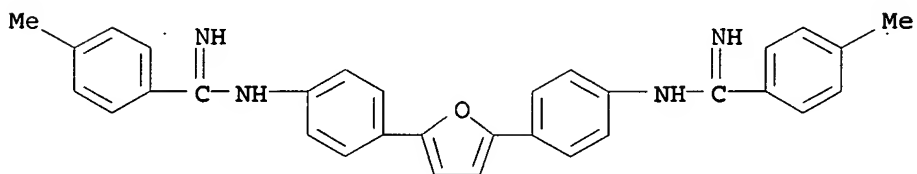
CN Benzenecarboximidamide, N,N'-(2,5-furandiyl)-4,4'-bis[4-methyl-1-phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

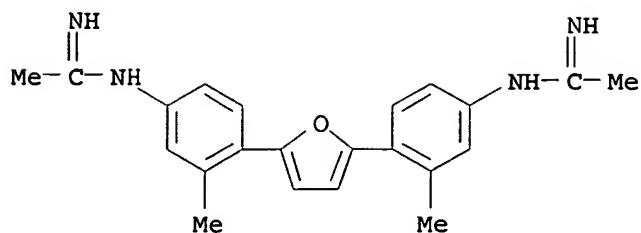
RN 443797-81-7 HCAPLUS

CN Benzenecarboximidamide, N,N'-(2,5-furandiyl)-4,4'-bis[4-methyl-1-phenyl]-, dihydrochloride (9CI) (CA INDEX NAME)



RN 443797-83-9 HCAPLUS

CN Ethanimidamide, N,N'-(2,5-furandiyl)-bis[4-methyl-1-phenyl]-, dihydrobromide (9CI) (CA INDEX NAME)



●<sub>2</sub> HBr

IT 347190-87-8P 347190-88-9P 347190-89-0P

347190-90-3P 347190-91-4P 347190-92-5P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

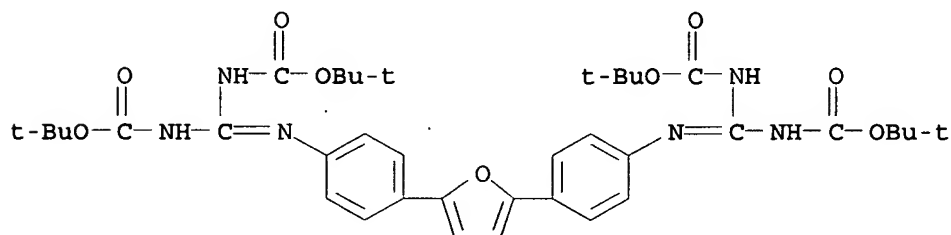
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      (preparation of bis(amidino- and guanidinophenyl)furans and analogs as
microbicides)

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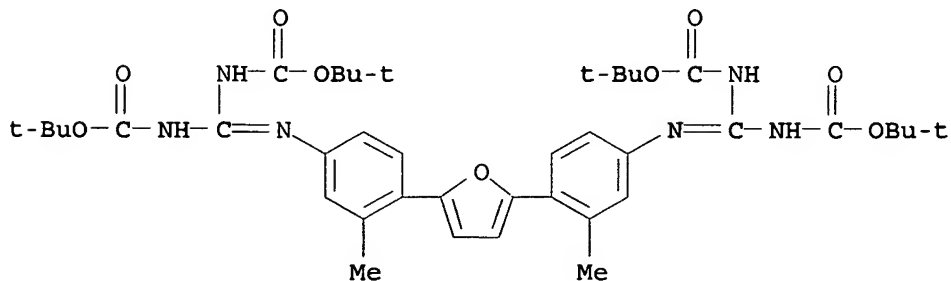
RN 347190-87-8 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis(4,1-phenylenenitrilomethanetetrayl)]tetra  
kis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



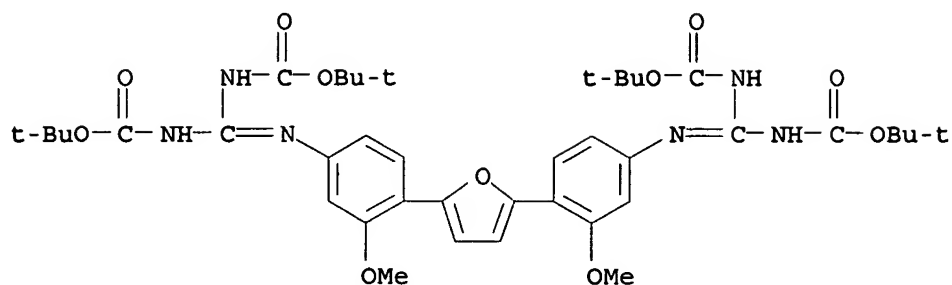
RN 347190-88-9 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-methyl-4,1-phenylene)nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



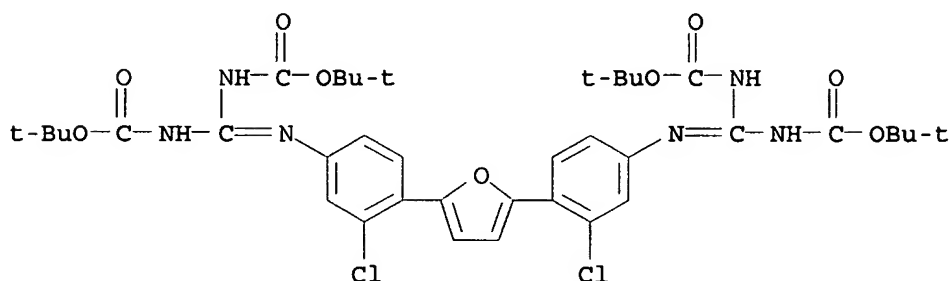
RN 347190-89-0 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-methoxy-4,1-phenylene)nitri-  
lomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



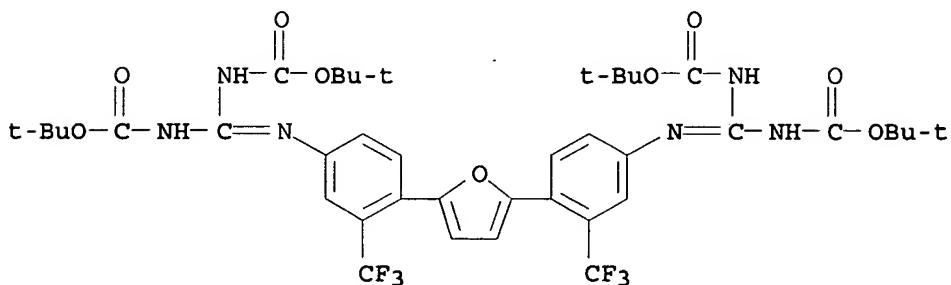
RN 347190-90-3 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-chloro-4,1-phenylene)nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



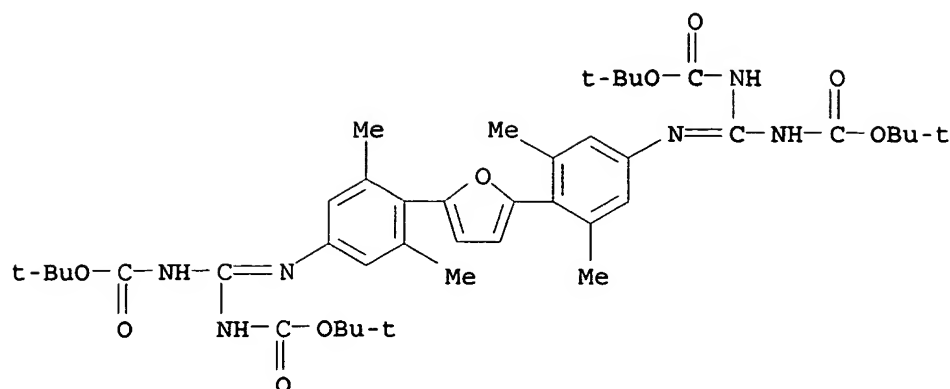
RN 347190-91-4 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[[3-(trifluoromethyl)-4,1-phenylene]nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 347190-92-5 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3,5-dimethyl-4,1-phenylene)nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



L12 ANSWER 19 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:539483 HCAPLUS

DN 137:103864

TI Compounds useful for the treatment of bovine viral diarrhea virus and hepatitis C virus infections

IN Boykin, David; Tidwell, Richard R.; Stringfellow, David; Brock, Kenny; Stephens, Chad E.; Kumar, Arvind; Wilson, W. David; Givens, Daniel; Dykstra, Christine

PA University of North Carolina At Chapel Hill, USA; Georgia State University Research Foundation; Auburn University

SO PCT Int. Appl., 68 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002055025	A2	20020718	WO 2002-US787	20020111
	WO 2002055025	A3	20040115		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	CA 2433070	AA	20020718	CA 2002-2433070	20020111
	US 2003199521	A1	20031023	US 2002-44315	20020111
	EP 1399163	A2	20040324	EP 2002-705743	20020111
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	JP 2004525881	T2	20040826	JP 2002-555762	20020111
	US 2006063931	A1	20060323	US 2005-262427	20051028
PRAI	US 2001-261654P	P	20010113		
	US 2002-44315	B1	20020111		
	WO 2002-US787	W	20020111		
	US 2004-796657	A3	20040309		
OS	MARPAT 137:103864				
AB	The invention relates to novel compds. and methods that are useful in				

treating members of the Flaviviridae family of viruses. Compds. disclosed in the invention are shown to be effective against bovine viral diarrhea virus and hepatitis C virus infection.

IC ICM A61K

CC 1-5 (Pharmacology)

Section cross-reference(s): 28

ST antiviral cattle diarrhea virus hepatitis C infection

IT Antiviral agents

Bos taurus

Bovine diarrhea virus

Embryo, animal

Flaviviridae

Hepatitis C virus

Human

(compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT Drug delivery systems

(injections, i.v.; compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT Drug delivery systems

(oral; compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT 423165-10-0 423165-11-1 423165-30-4

423165-31-5 433735-86-5 433735-89-8 433735-90-1

442842-40-2 442842-41-3 442842-42-4 442842-43-5 442842-44-6

442842-45-7 442842-46-8 442842-47-9 442842-48-0

442842-49-1 442842-50-4

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)

(compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT 95-54-5, 1,2-Phenylenediamine, reactions 7147-77-5, 5-(4-

Nitrophenyl)furfural 7149-70-4, 2-Bromo-5-nitrotoluene 52130-32-2,

5-(4-Cyanophenyl)-2-furancarboxaldehyde 68662-17-9 68827-43-0,

4-Amidino-1,2-phenylenediamine 148344-30-3 193361-76-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT 53715-17-6P 56297-30-4P 251577-90-9P 332360-11-9P 347190-78-7P

347190-79-8P 347190-80-1P 347190-81-2P 347190-82-3P 347190-83-4P

347190-84-5P 347190-85-6P 347190-86-7P 347190-87-8P

347190-88-9P 347190-89-0P 347190-90-3P

347190-91-4P 347190-92-5P 442842-52-6P 442842-54-8P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT 347190-93-6P 347190-94-7P 347190-95-8P

347190-96-9P 347190-97-0P 347190-98-1P

442842-51-5P 442842-53-7P 442842-55-9P

RL: SPN (Synthetic preparation); PREP (Preparation)

(compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT 9003-99-0, Peroxidase

RL: BSU (Biological study, unclassified); BIOL (Biological study)

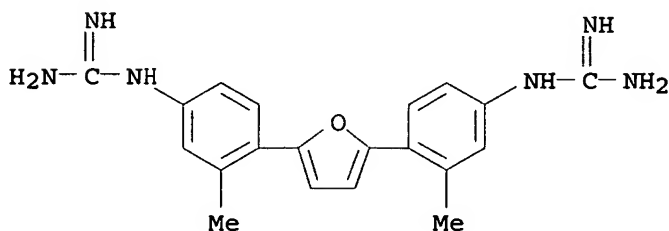
(in immunoassay; compds. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

IT 443408-63-7 443408-64-8 443408-65-9

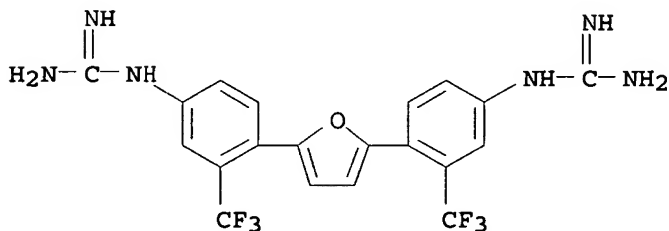
RL: PRP (Properties)

(unclaimed nucleotide sequence; compds. useful for the treatment of

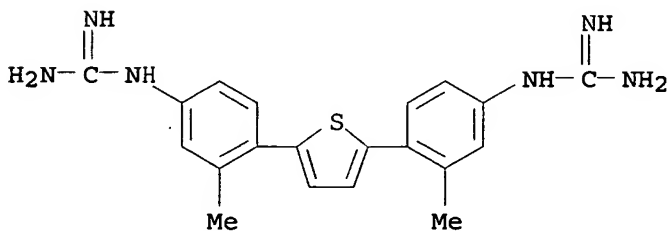
bovine viral diarrhea virus and hepatitis C virus infections)  
IT 423165-10-0 423165-11-1 423165-30-4  
423165-31-5 442842-45-7 442842-48-0  
442842-49-1 442842-50-4  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(comps. for treatment of bovine viral diarrhea virus infection and  
hepatitis C virus infection)  
RN 423165-10-0 HCAPLUS  
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)



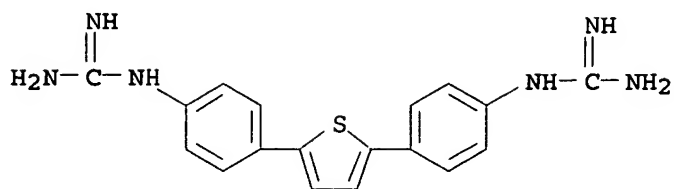
RN 423165-11-1 HCAPLUS  
CN Guanidine, N,N'''-[2,5-furandiylbis[3-(trifluoromethyl)-4,1-phenylene]]bis-  
(9CI) (CA INDEX NAME)



RN 423165-30-4 HCAPLUS  
CN Guanidine, N,N'''-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

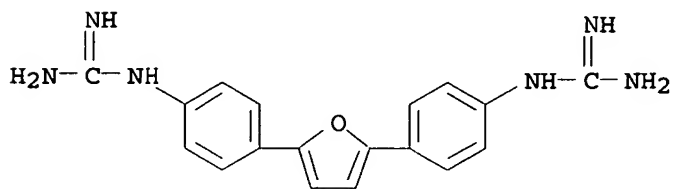


RN 423165-31-5 HCAPLUS  
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NAME)



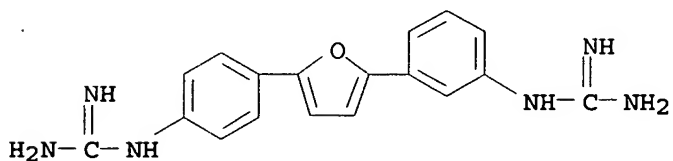
RN 442842-45-7 HCAPLUS

CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



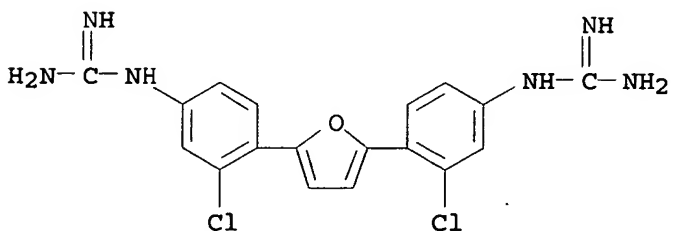
RN 442842-48-0 HCAPLUS

CN Guanidine, [3-[5-[4-[(aminoiminomethyl)amino]phenyl]-2-furanyl]phenyl]- (9CI) (CA INDEX NAME)



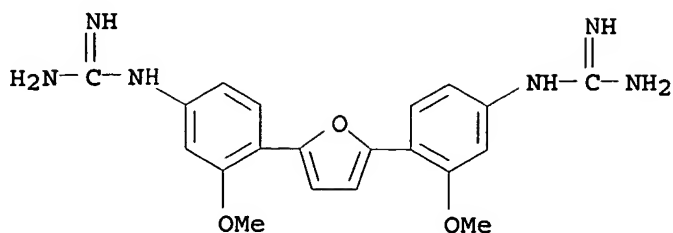
RN 442842-49-1 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 442842-50-4 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



IT 347190-87-8P 347190-88-9P 347190-89-0P

347190-90-3P 347190-91-4P 347190-92-5P

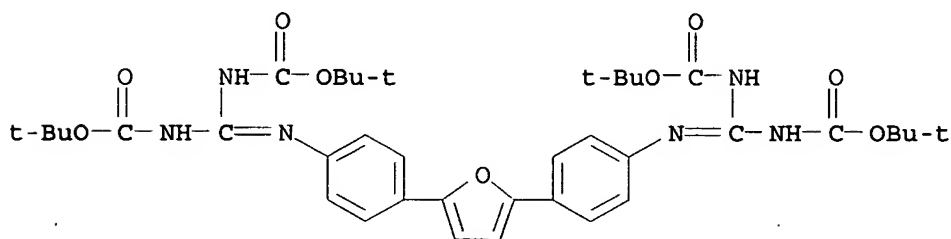
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(comps. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

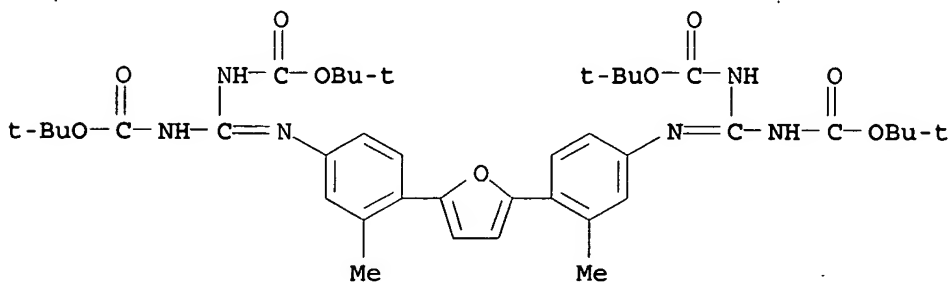
RN 347190-87-8 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis(4,1-phenylenenitrilomethanetetrayl)]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



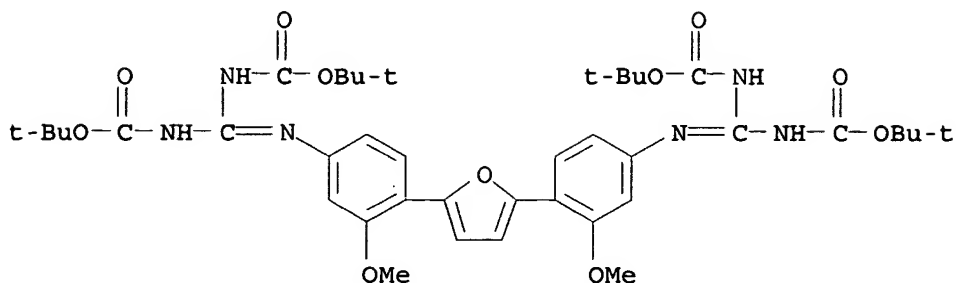
RN 347190-88-9 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-methyl-4,1-phenylene)nitritomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



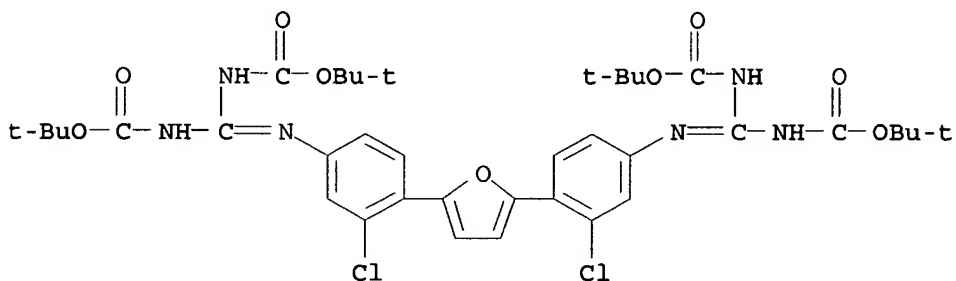
RN 347190-89-0 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-methoxy-4,1-phenylene)nitritomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



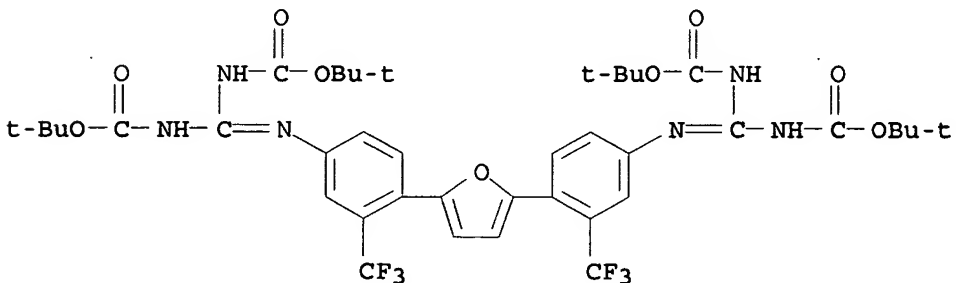
RN 347190-90-3 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-chloro-4,1-phenylene)nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



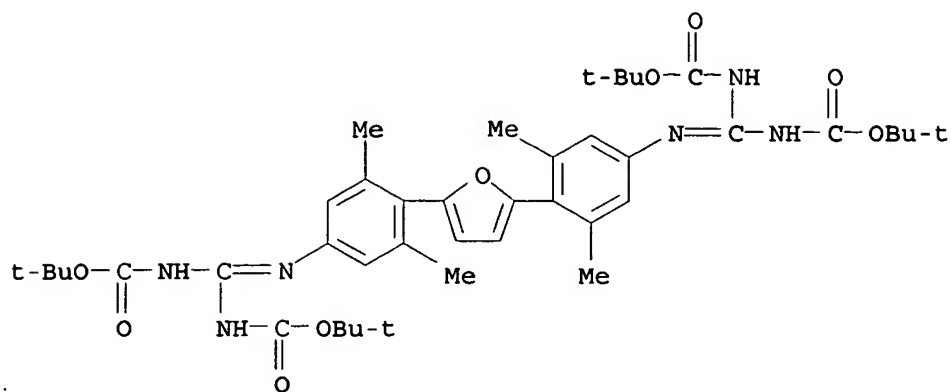
RN 347190-91-4 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[[3-(trifluoromethyl)-4,1-phenylene]nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 347190-92-5 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3,5-dimethyl-4,1-phenylene)nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



IT 347190-93-6P 347190-94-7P 347190-95-8P

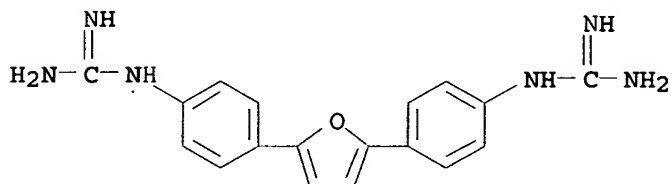
347190-96-9P 347190-97-0P 347190-98-1P

RL: SPN (Synthetic preparation); PREP (Preparation)

(comps. for treatment of bovine viral diarrhea virus infection and hepatitis C virus infection)

RN 347190-93-6 HCAPLUS

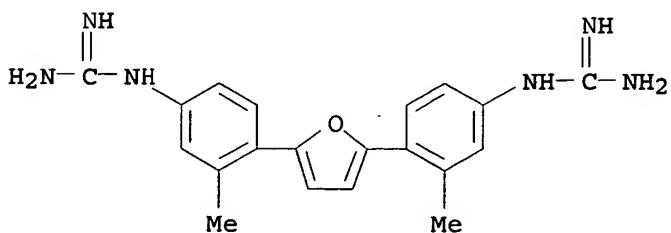
CN Guanidine, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-94-7 HCAPLUS

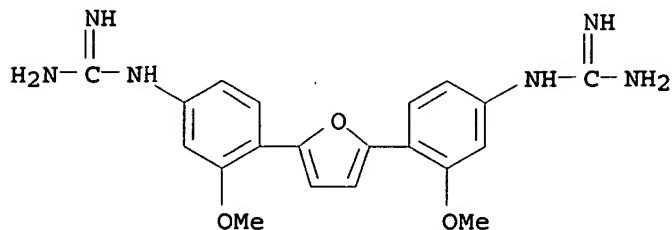
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-95-8 HCAPLUS

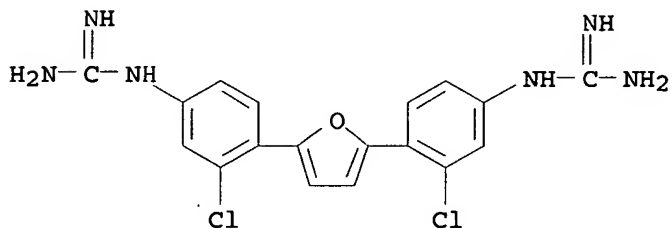
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-96-9 HCAPLUS

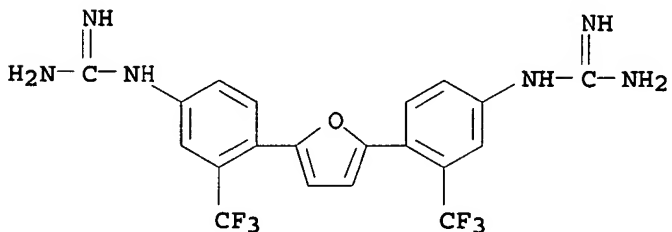
CN Guanidine, N,N'''-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-97-0 HCAPLUS

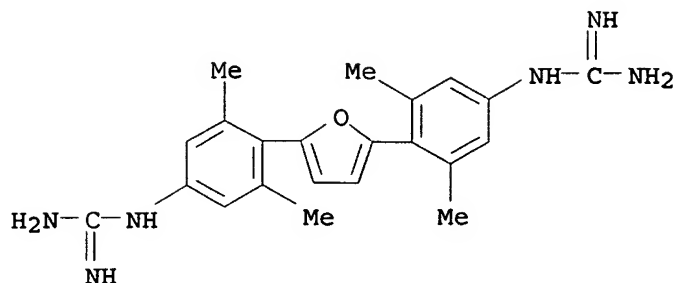
CN Guanidine, N,N'''-[2,5-furandiylbis[3-(trifluoromethyl)-4,1-phenylene]]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-98-1 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

L12 ANSWER 20 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2002:353451 HCAPLUS

DN 136:363813

TI Reversed amidines and methods of using them for treating, preventing, or inhibiting leishmaniasis

IN Werbovetz, Karl A.; Brendle, James J.; Boykin, David W.; Stephens, Chad E.

PA U.S. Army Medical Research and Material Command, USA

SO PCT Int. Appl., 67 pp.

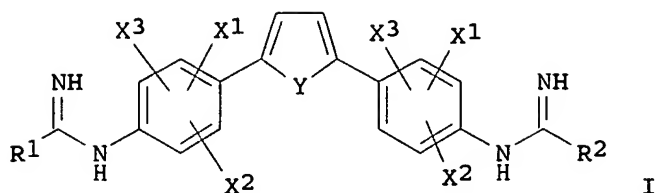
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002036588	A2	20020510	WO 2001-US42905	20011105
	WO 2002036588	A3	20030828		
	W:	AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW			
	RW:	GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	AU 2002032400	A5	20020515	AU 2002-32400	20011105
	US 2002156098	A1	20021024	US 2001-985590	20011105
	US 6706754	B2	20040316		
PRAI	US 2000-246277P	P	20001106		
	US 2000-246330P	P	20001107		
	US 2001-288428P	P	20010504		
	US 2000-246244P	P	20001106		
	WO 2001-US42905	W	20011105		
OS	MARPAT 136:363813				
GI					



- AB Methods are disclosed for treating, preventing or inhibiting leishmaniasis in a subject which comprise administering to the subject a therapeutically effective amount of at least one compound I (Y = heteroatom; R1, R2 = H, alkyl, cycloalkyl, heterocycloalkyl, aryl, amino, heteroaryl; X1, X2, X3 = H, alkyl, alkoxy, halo, amino, alkylamino, dialkylamino, acylamino, alkylthio, sulfonyl, cyano, carboxy, alkoxycarbonyl, carbamoyl).
- IC ICM C07D405-00
- CC 1-5 (Pharmacology)
- ST heterocyclic deriv reversed amidine leishmaniasis treatment; furan deriv reversed amidine leishmaniasis treatment; thiophene deriv reversed amidine leishmaniasis treatment
- IT Infection  
(leishmaniasis, cutaneous or mucocutaneous or visceral; reversed amidines for treating, preventing, or inhibiting leishmaniasis)
- IT Protozoacides  
(leishmanicides; reversed amidines for treating, preventing, or inhibiting leishmaniasis)
- IT Drug delivery systems  
Leishmania  
Leishmania donovani  
Leishmania mexicana  
Parasiticides  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis)
- IT Amidines  
RL: BSU (Biological study, unclassified); BIOL (Biological study)  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis)
- IT 7035-69-0P 53715-17-6P 56297-30-4P 57279-70-6P 101793-47-9P  
103966-66-1P 251577-90-9P 347190-78-7P 347190-79-8P 347190-80-1P  
347190-81-2P 347190-82-3P 347190-83-4P 347190-84-5P 347190-86-7P  
423165-32-6P 423165-34-8P 423165-35-9P 423165-36-0P 423165-37-1P  
423165-39-3P 423165-42-8P 423165-48-4P 423165-49-5P 423165-50-8P  
423165-51-9P 423165-52-0P 423165-60-0P 423165-63-3P  
423165-65-5P 423165-67-7P 423165-70-2P  
423165-73-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(preparation and reaction; reversed amidines for treating, preventing, or inhibiting leishmaniasis)
- IT 75-30-9, 2-Iodopropane 98-88-4, Benzoyl chloride 367-67-9,  
2-Bromo-5-nitrobenzotrifluoride 586-78-7, 4-Bromonitrobenzene  
610-38-8, 4-Bromo-1,2-dinitrobenzene 6345-68-2 7149-70-4,  
2-Bromo-5-nitrotoluene 29682-39-1, 1-Bromo-2-chloro-4-nitrobenzene  
52427-05-1, 2-Bromo-5-nitrophenol 53906-84-6 70010-49-0 77337-82-7,  
2-Bromo-5-nitroanisoie 145483-63-2 180002-24-8 193361-76-1  
215175-55-6 347191-10-0 347191-22-4 347191-23-5 347191-24-6  
423165-33-7 423165-53-1  
RL: RCT (Reactant); RACT (Reactant or reagent)

(reaction; reversed amidines for treating, preventing, or inhibiting leishmaniasis)

IT 347191-02-0P  
RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis)

IT 347190-99-2P 347191-03-1P 347191-04-2P  
347191-07-5P 347191-09-7P 347191-14-4P  
347191-16-6P 347191-18-8P 347191-20-2P  
423165-06-4P 423165-09-7P 423165-22-4P  
423165-25-7P 423165-28-0P 423165-29-1P  
423165-31-5P 423165-62-2P  
RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis)

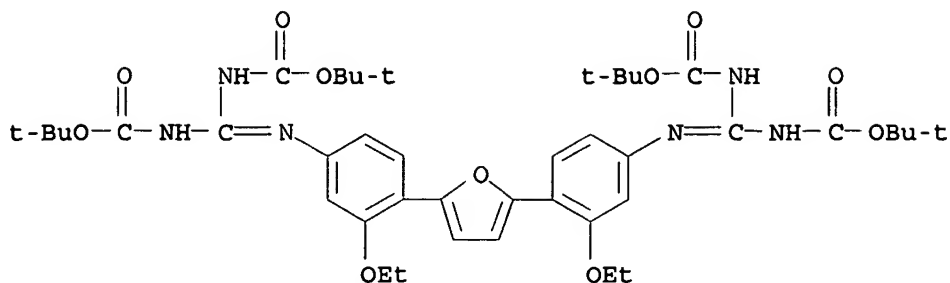
IT 423165-10-0 423165-11-1 423165-12-2  
423165-14-4 423165-15-5 423165-16-6 423165-17-7  
423165-18-8 423165-19-9 423165-20-2  
423165-21-3 423165-23-5 423165-24-6  
423165-26-8 423165-27-9 423165-30-4  
423165-75-7  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis)

IT 347190-85-6P 347191-00-8P 347191-05-3P  
347191-08-6P 347191-11-1P 347191-15-5P  
347191-17-7P 347191-19-9P 347191-21-3P  
423165-54-2P 423165-55-3P 423165-56-4P  
423165-57-5P 423165-58-6P 423165-59-7P  
423165-61-1P 423165-64-4P 423165-66-6P  
423165-69-9P 423165-71-3P 423165-74-6P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis)

IT 100-33-4, Pentamidine 133-51-7, Meglumine antimoniate 1397-89-3, Amphotericin B 6284-40-8D, Meglumine, antimonite salts 7542-37-2, Paromomycin 16037-91-5, Sodium stibogluconate 58066-85-6, Miltefosine  
RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL (Biological study); USES (Uses)  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis, and use with other agents)

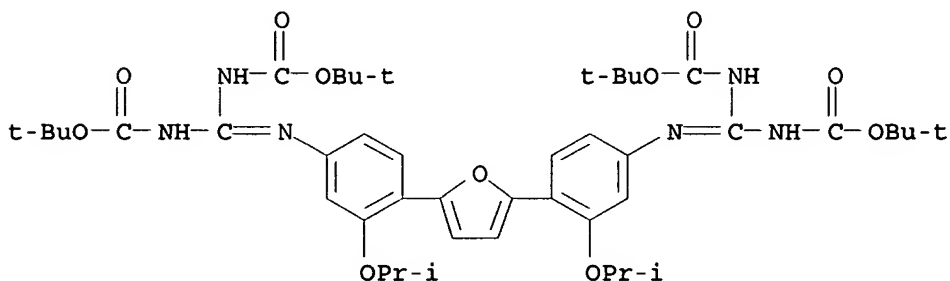
IT 423165-60-0P 423165-63-3P 423165-65-5P  
423165-67-7P 423165-70-2P 423165-73-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(preparation and reaction; reversed amidines for treating, preventing, or inhibiting leishmaniasis)

RN 423165-60-0 HCAPLUS  
CN Carbamic acid, [2,5-furandiylbis[(3-ethoxy-4,1-phenylene)nitriomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



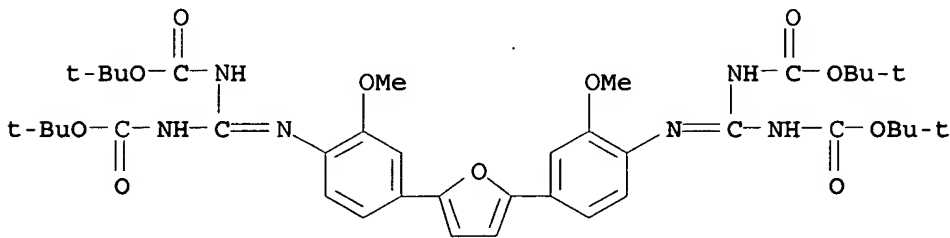
RN 423165-63-3 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[[3-(1-methylethoxy)-4,1-phenylene]nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



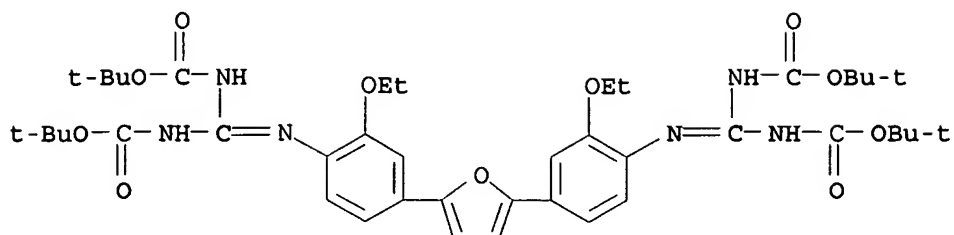
RN 423165-65-5 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[[2-methoxy-4,1-phenylene]nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



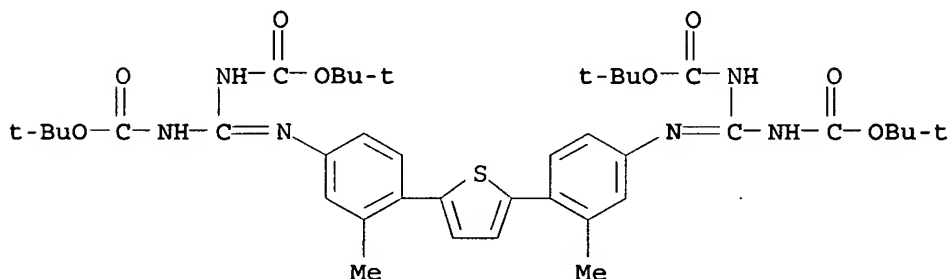
RN 423165-67-7 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[[2-ethoxy-4,1-phenylene]nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



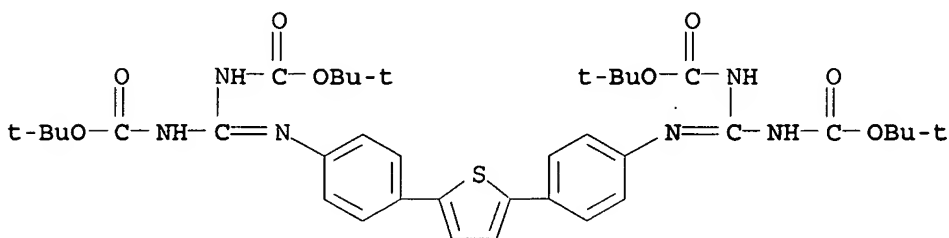
RN 423165-70-2 HCAPLUS

CN Carbamic acid, [2,5-thiophenediylbis[(3-methyl-4,1-phenylene)nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



RN 423165-73-5 HCAPLUS

CN Carbamic acid, [2,5-thiophenediylbis(4,1-phenylenenitrimethanetetrayl)]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)

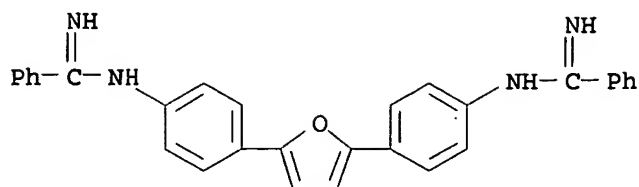


IT 347191-02-0P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)  
(reversed amidines for treating, preventing, or inhibiting leishmaniasis)

RN 347191-02-0 HCAPLUS

CN Benzenecarboximidamide, N,N''-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



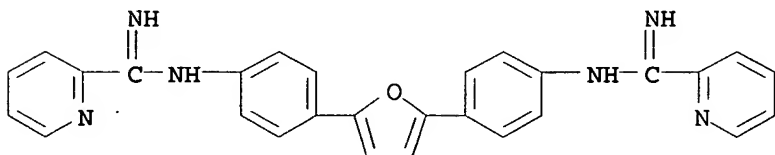
IT 347190-99-2P 347191-03-1P 347191-04-2P  
 347191-07-5P 347191-09-7P 347191-14-4P  
 347191-16-6P 347191-18-8P 347191-20-2P  
 423165-06-4P 423165-09-7P 423165-22-4P  
 423165-25-7P 423165-28-0P 423165-29-1P  
 423165-31-5P 423165-62-2P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU  
 (Therapeutic use); BIOL (Biological study); PREP (Preparation);  
 USES (Uses)

(reversed amidines for treating, preventing, or inhibiting  
 leishmaniasis)

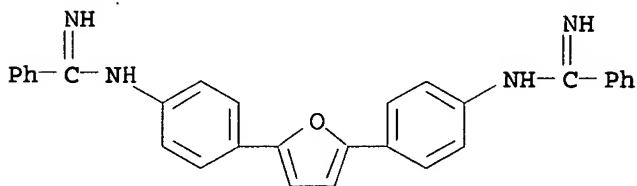
RN 347190-99-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis- (9CI)  
 (CA INDEX NAME)



RN 347191-03-1 HCAPLUS

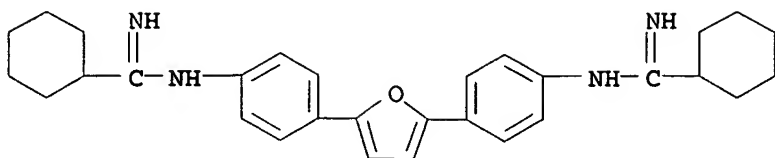
CN Benzenecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-,  
 dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

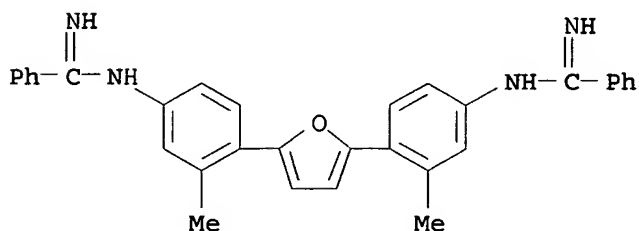
RN 347191-04-2 HCAPLUS

CN Cyclohexanecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-  
 (9CI) (CA INDEX NAME)



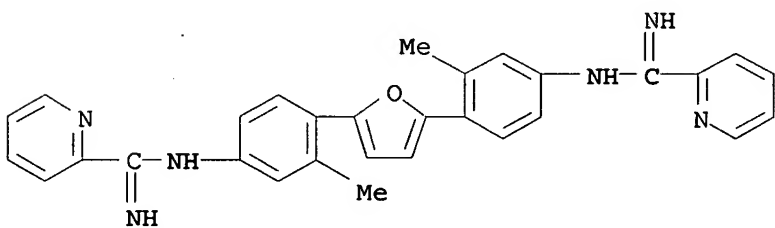
RN 347191-07-5 HCAPLUS

CN Benzenecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



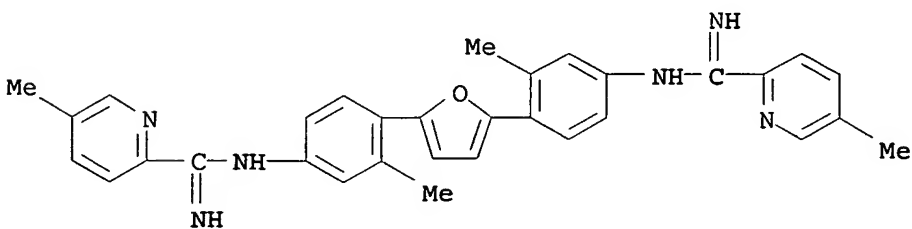
RN 347191-09-7 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



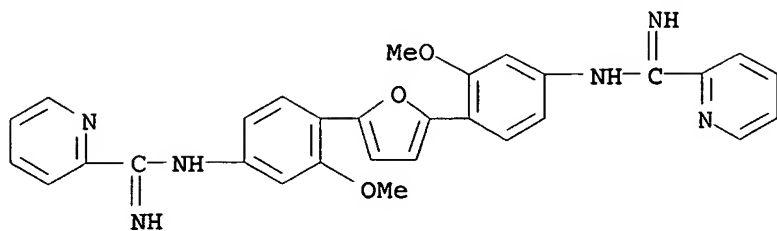
RN 347191-14-4 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis[5-methyl- (9CI) (CA INDEX NAME)



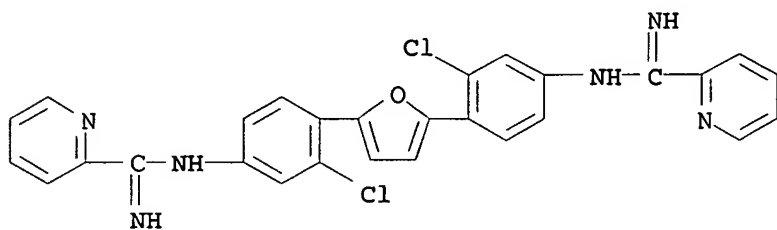
RN 347191-16-6 HCAPLUS

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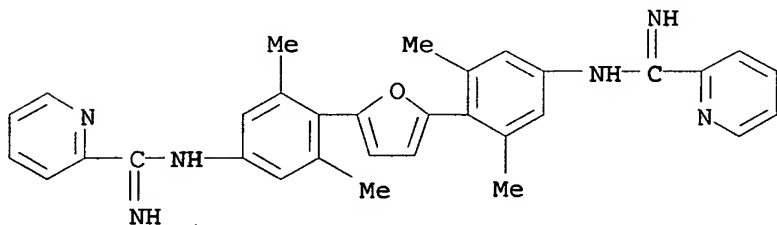
RN 347191-18-8 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



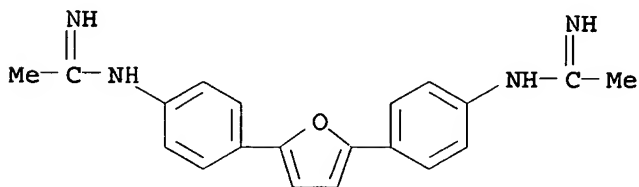
RN 347191-20-2 HCAPLUS

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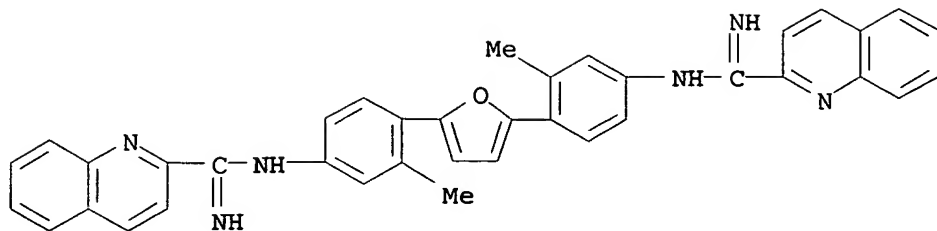
RN 423165-06-4 HCAPLUS

CN Ethanimidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



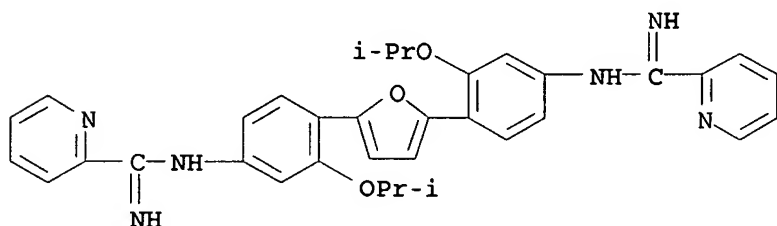
RN 423165-09-7 HCAPLUS

CN 2-Quinolonecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



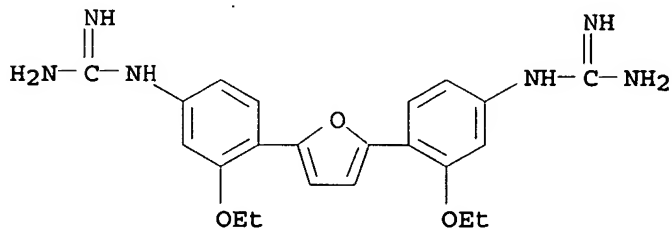
RN 423165-22-4 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



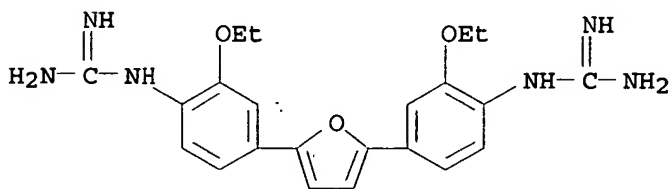
RN 423165-25-7 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-ethoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



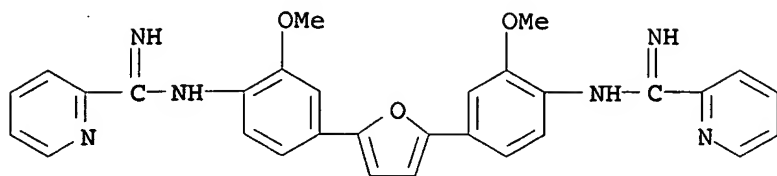
RN 423165-28-0 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(2-ethoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



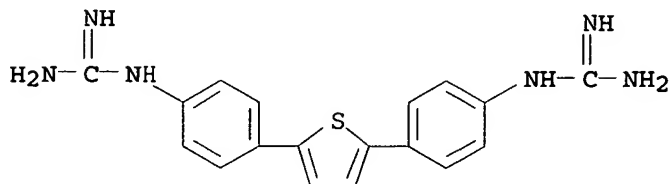
RN 423165-29-1 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(2-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



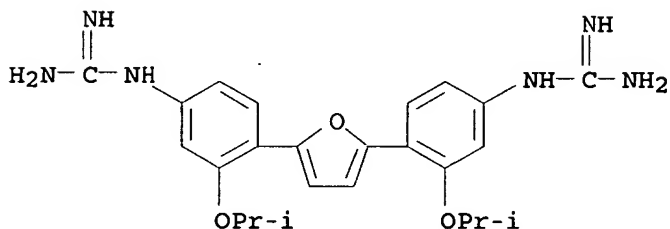
RN 423165-31-5 HCAPLUS

CN Guanidine, N,N'''-(2,5-thiophenediyl-di-4,1-phenylene)bis- (9CI) (CA INDEX NAME)



RN 423165-62-2 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



IT 423165-10-0 423165-11-1 423165-12-2

423165-16-6 423165-17-7 423165-18-8

423165-19-9 423165-20-2 423165-21-3

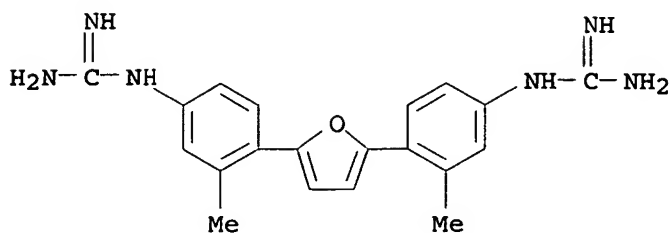
423165-23-5 423165-24-6 423165-26-8

423165-27-9 423165-30-4 423165-75-7

RL: PAC (Pharmacological activity); THU (Therapeutic use); BIOL  
(Biological study); USES (Uses)  
(reversed amidines for treating, preventing, or inhibiting  
leishmaniasis)

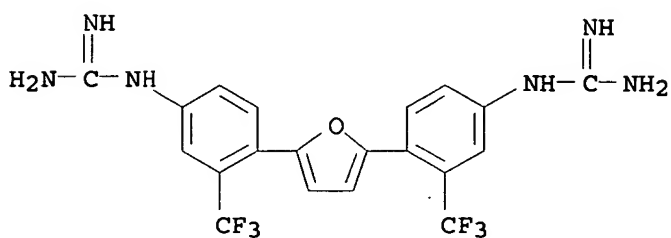
RN 423165-10-0 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)



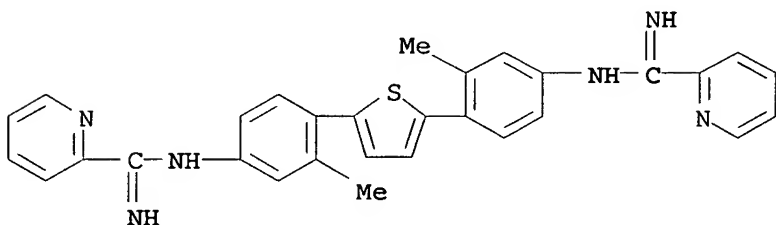
RN 423165-11-1 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis[3-(trifluoromethyl)-4,1-phenylene]]bis- (9CI) (CA INDEX NAME)



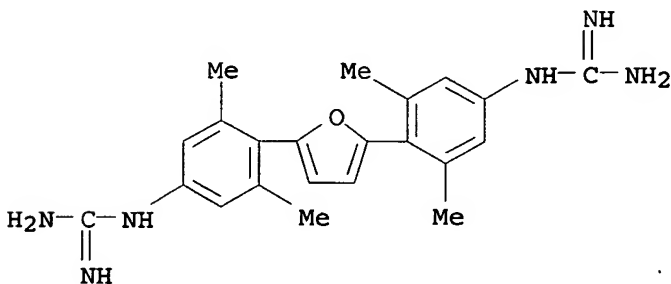
RN 423165-12-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 423165-16-6 HCAPLUS

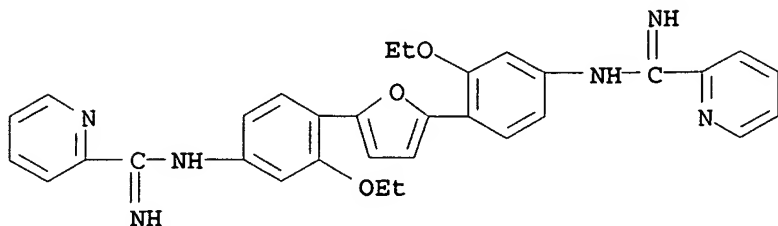
CN Guanidine, N,N'''-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 423165-17-7 HCAPLUS

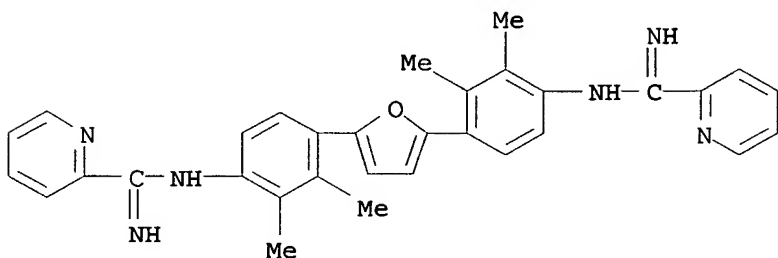
CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-ethoxy-4,1-

phenylene)]bis- (9CI) (CA INDEX NAME)



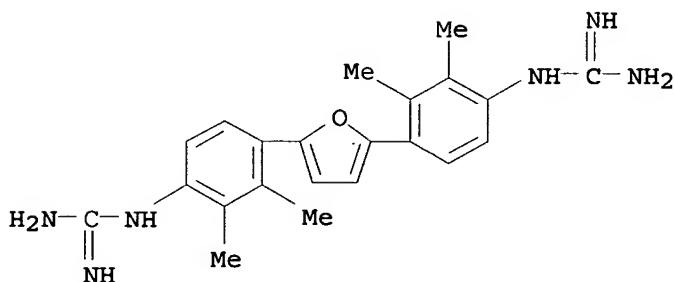
RN 423165-18-8 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(2,3-dimethyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



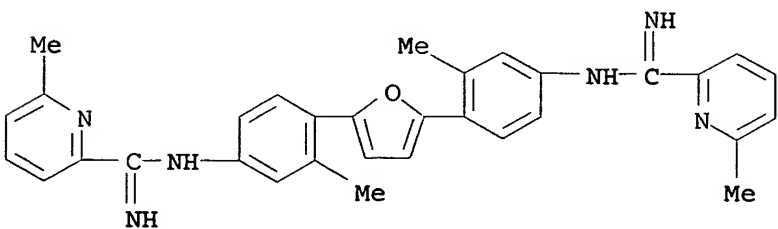
RN 423165-19-9 HCAPLUS

CN Guanidine, N,N',N''-[2,5-furandiylbis(2,3-dimethyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



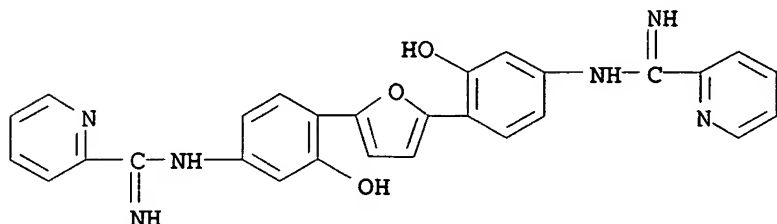
RN 423165-20-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis[6-methyl- (9CI) (CA INDEX NAME)



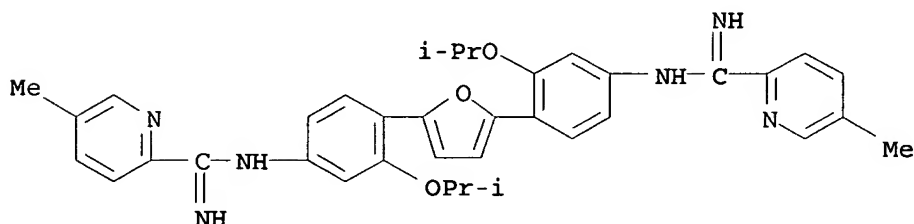
RN 423165-21-3 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-hydroxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



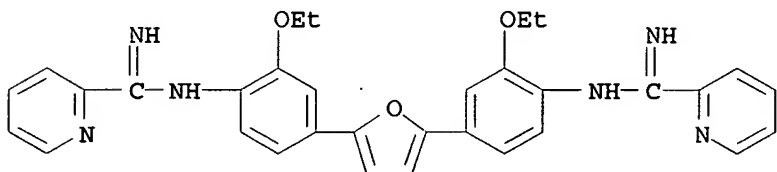
RN 423165-23-5 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis[5-methyl- (9CI) (CA INDEX NAME)



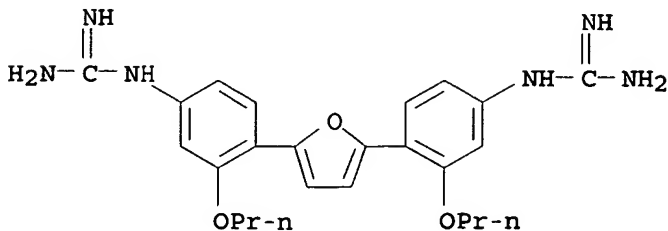
RN 423165-24-6 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(2-ethoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



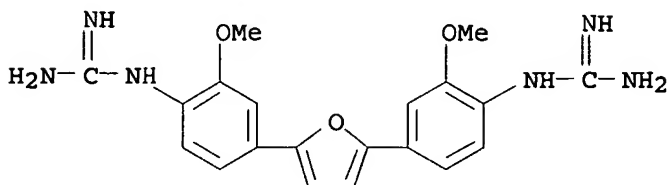
RN 423165-26-8 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(3-propoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



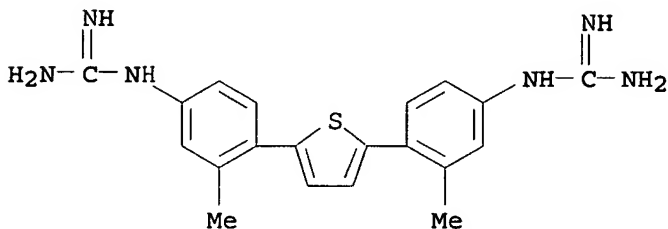
RN 423165-27-9 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(2-methoxy-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)



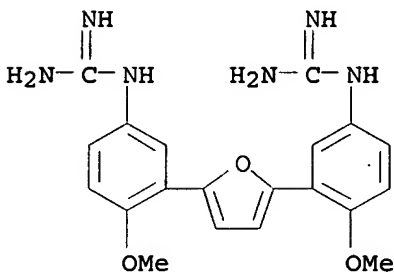
RN 423165-30-4 HCAPLUS

CN Guanidine, N,N'''-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)



RN 423165-75-7 HCAPLUS

CN Guanidine, N,N'''-[2,5-furandiylbis(4-methoxy-3,1-phenylene)]bis- (9CI)  
(CA INDEX NAME)

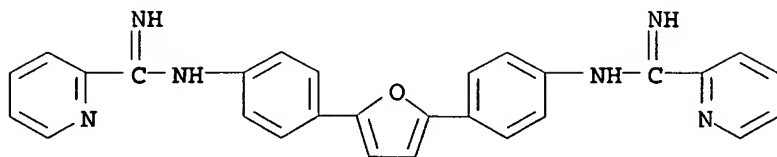


IT 347191-00-8P 347191-05-3P 347191-08-6P  
347191-11-1P 347191-15-5P 347191-17-7P  
347191-19-9P 347191-21-3P 423165-54-2P  
423165-55-3P 423165-56-4P 423165-57-5P  
423165-58-6P 423165-59-7P 423165-61-1P  
423165-64-4P 423165-66-6P 423165-69-9P  
423165-71-3P 423165-74-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(reversed amidines for treating, preventing, or inhibiting  
leishmaniasis)

RN 347191-00-8 HCAPLUS

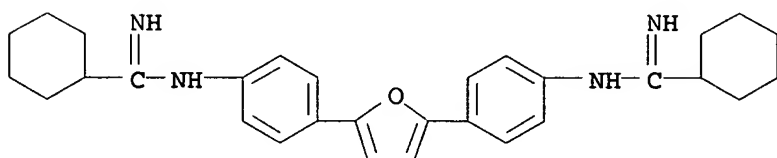
CN 2-Pyridinecarboximidamide, N,N'''-(2,5-furandiyl-di-4,1-phenylene)bis-,  
hydrochloride (2:7) (9CI) (CA INDEX NAME)



●7/2 HCl

RN 347191-05-3 HCAPLUS

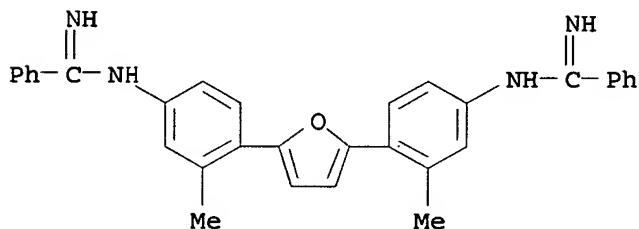
CN Cyclohexanecarboximidamide, N,N'-(2,5-furandiyl)di-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-08-6 HCAPLUS

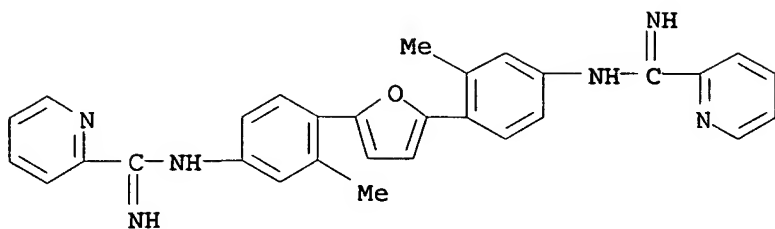
CN Benzenecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-11-1 HCAPLUS

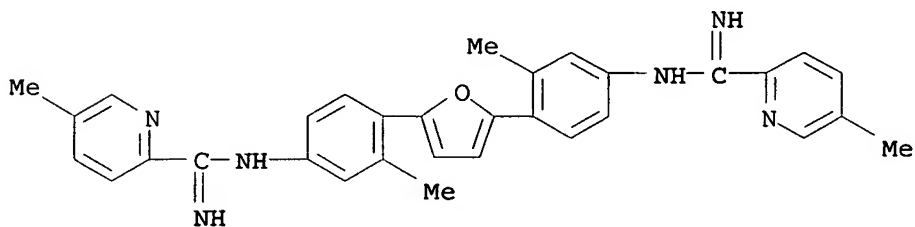
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, hydrochloride (2:7) (9CI) (CA INDEX NAME)



●7/2 HCl

RN 347191-15-5 HCAPLUS

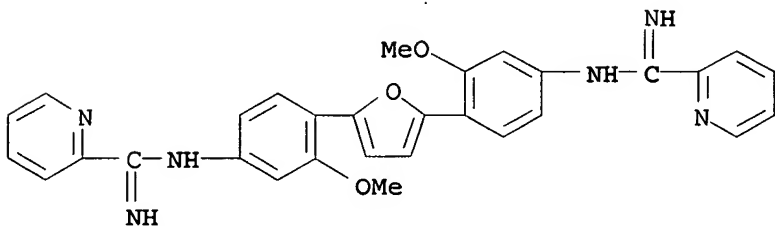
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis[5-methyl-, hydrochloride (4:13) (9CI) (CA INDEX NAME)



●13/4 HCl

RN 347191-17-7 HCAPLUS

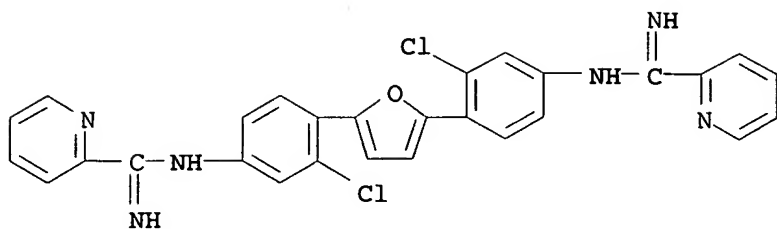
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-19-9 HCAPLUS

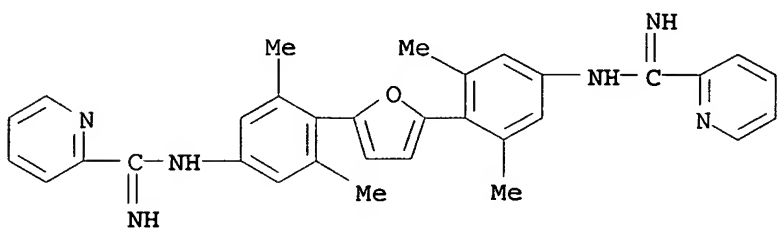
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-21-3 HCAPLUS

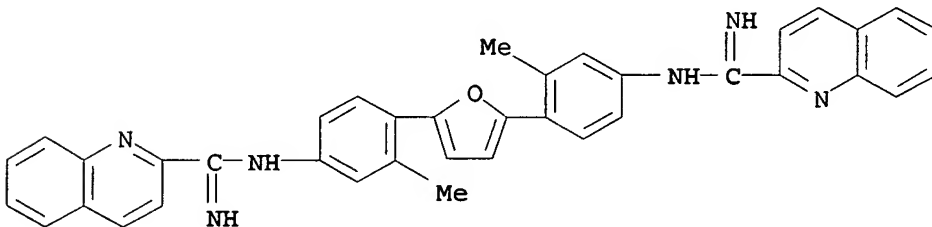
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis-, hydrochloride (4:15) (9CI) (CA INDEX NAME)



●15/4 HCl

RN 423165-54-2 HCAPLUS

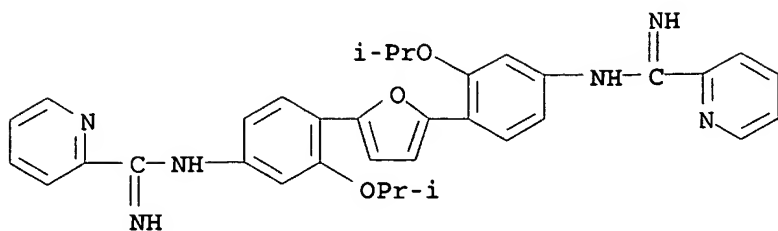
CN 2-Quinolinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 423165-55-3 HCAPLUS

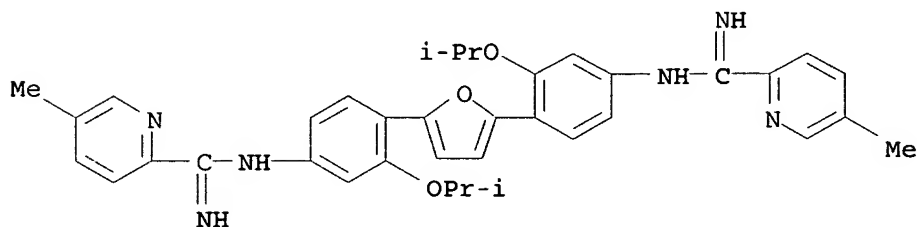
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 423165-56-4 HCAPLUS

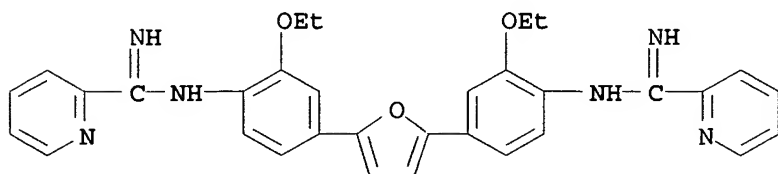
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis[5-methyl-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 423165-57-5 HCAPLUS

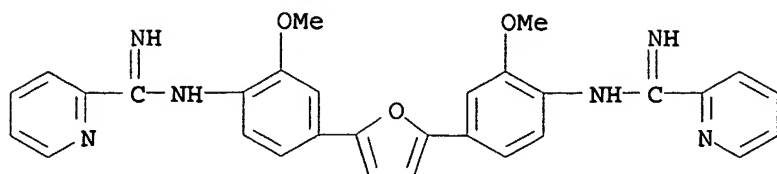
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(2-ethoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 423165-58-6 HCAPLUS

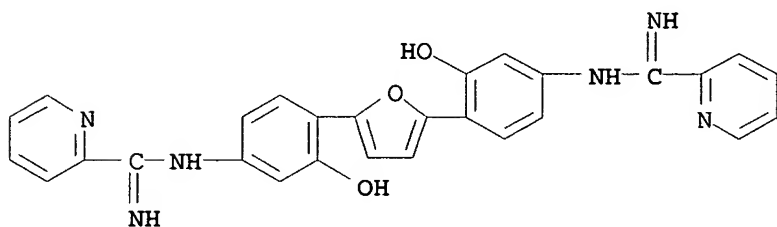
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(2-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 423165-59-7 HCAPLUS

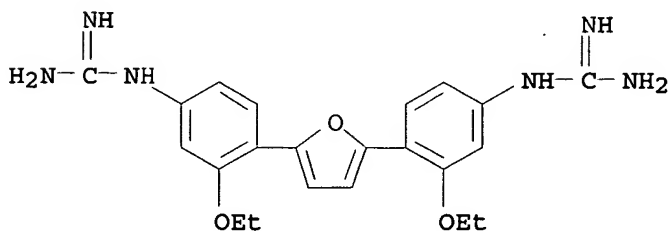
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-hydroxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 423165-61-1 HCAPLUS

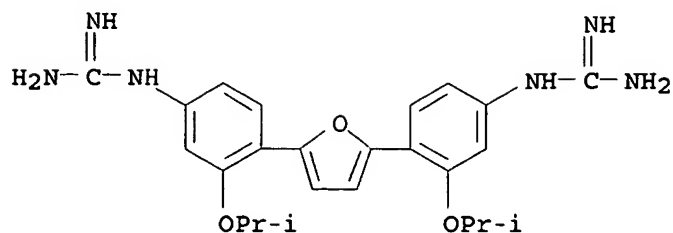
CN Guanidine, N,N',N''-[2,5-furandiylbis(3-ethoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 423165-64-4 HCAPLUS

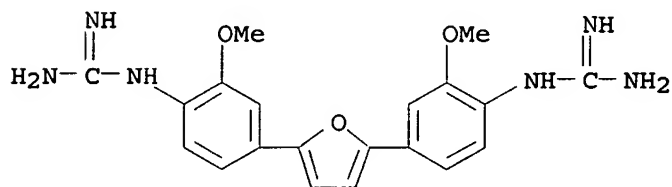
CN Guanidine, N,N',N''-[2,5-furandiylbis[3-(1-methylethoxy)-4,1-phenylene]]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 423165-66-6 HCAPLUS

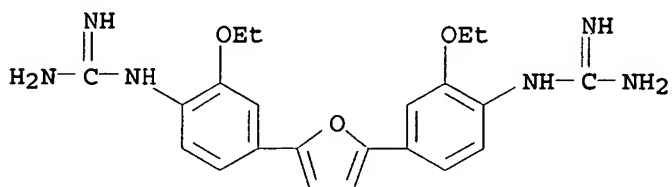
CN Guanidine, N,N'''-[2,5-furandiylbis(2-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 423165-69-9 HCAPLUS

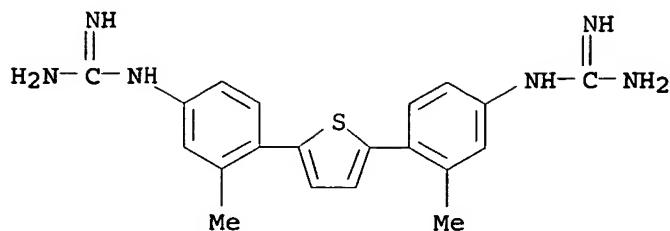
CN Guanidine, N,N'''-[2,5-furandiylbis(2-ethoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 423165-71-3 HCAPLUS

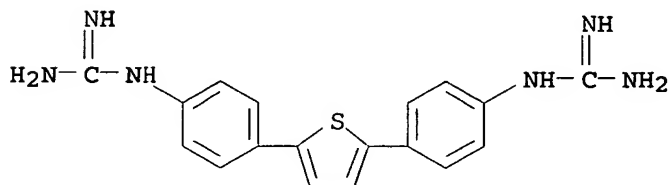
CN Guanidine, N,N'''-[2,5-thiophenediylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

RN 423165-74-6 HCAPLUS

CN Guanidine, N,N''-(2,5-thiophenediyl-di-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



● 2 HCl

L12 ANSWER 21 OF 21 HCAPLUS COPYRIGHT 2006 ACS on STN

AN 2001:301099 HCAPLUS

DN 135:76736

TI Diguanidino and "Reversed" Diamidino 2,5-Diarylfurans as Antimicrobial Agents

AU Stephens, Chad E.; Tanious, Farial; Kim, Susan; Wilson, W. David; Schell, Wiley A.; Perfect, John R.; Franzblau, Scott G.; Boykin, David W.

CS Department of Chemistry, Georgia State University, Atlanta, GA, 30303-3083, USA

SO Journal of Medicinal Chemistry (2001), 44(11), 1741-1748  
CODEN: JMCMAR; ISSN: 0022-2623

PB American Chemical Society

DT Journal

LA English

OS CASREACT 135:76736

GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB Dicationic 2,5-bis(4-guanidinophenyl)furans, e.g. I, 2,5-bis[4-(arylimino)aminophenyl]furans, e.g. II, and 2,5-bis[4-(alkylimino)aminophenyl]furans, e.g. III have been synthesized starting from 2,5-bis[tri-n-butylstannyl]furan. Thermal melting studies with poly

dA•dT and the duplex oligomer d(CGCGAATTCGCG)<sub>2</sub> demonstrated high DNA binding affinities for a number of the compds. The binding affinities are highly dependent on structure and are significantly affected by substituents both on the Ph rings of the 2,5-diphenylfuran nucleus and on the cationic centers. Of the 17 novel dicationic compds. synthesized, six exhibited MICs of 2 µg/mL or less vs. *Mycobacterium tuberculosis*. Of the compds. screened against *Candida albicans*, three gave MICs of 2 µg/mL or less (I, II and IV) and two (I, II) were fungicidal, unlike a standard antifungal drug fluconazole, which was fungistatic. In addition, one of the tested compds. II exhibited a MIC of <1 µg/mL against *Aspergillus fumigatus*, while also being a fungicidal against this organism. Finally, when evaluated against an expanded fungal panel, compound IV showed good activity against *Cryptococcus neoformans* and *Rhizopus arrhizus*.

CC 27-6 (Heterocyclic Compounds (One Hetero Atom))  
 Section cross-reference(s): 1

ST fungicidal antituberculostatic amidinophenylfuran; substituent effect DNA binding affinity arylfuran cationic; arylfuran amidino guanidino antimicrobial agent prepn; furan guanidinophenyl prepn; amidinophenyl furan imino prepn

IT Imidic acids  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (esters, thio; preparation of (naphthylmethyl)thioimides from (bromomethyl)naphthalene and thioamides in synthesis of bis(amidinoaryl)furans as antifungicidal and antituberculosis agents)

IT Structure-activity relationship  
 (fungicidal; preparation of (naphthylmethyl)thioimides from (bromomethyl)naphthalene and thioamides in synthesis of bis(amidinoaryl)furans as antifungicidal and antituberculosis agents)

IT Thioamides  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (naphthylmethyl)thioimides from (bromomethyl)naphthalene and thioamides in synthesis of bis(amidinoaryl)furans as antifungicidal and antituberculosis agents)

IT Fungicides  
 Tuberculostatics  
 (preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

IT 347191-26-8P  
 RL: BYP (Byproduct); PREP (Preparation)  
 (formation of monoamidine byproduct in preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

IT 180002-24-8  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (formation of monoamidine byproduct in preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

IT 939-26-4, 2-(Bromomethyl)naphthalene 2227-79-4, Thiobenzamide  
 7390-42-3, Cyclohexanecarbothioamide 96898-30-5, Quinoline-2-carbothioamide  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of (naphthylmethyl)thioimides from (bromomethyl)naphthalene and thioamides in synthesis of bis(amidinoaryl)furans as antifungicidal and antituberculosis agents)

IT 347191-22-4P 347191-23-5P 347191-24-6P 347191-25-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of (naphthylmethyl)thioimides from (bromomethyl)naphthalene and thioamides in synthesis of bis(amidinoaryl)furans as antifungicidal and antituberculosis agents)

IT 347190-93-6P 347190-94-7P 347190-95-8P  
 347190-96-9P 347190-97-0P 347190-98-1P  
 347191-00-8P 347191-03-1P 347191-05-3P  
 347191-06-4P 347191-08-6P 347191-11-1P  
 347191-13-3P 347191-15-5P 347191-17-7P  
 347191-19-9P 347191-21-3P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

IT 367-67-9 586-78-7, 4-Bromo-1-nitrobenzene 7149-70-4,  
 1-Bromo-2-methyl-4-nitrobenzene 29682-39-1, 1-Bromo-2-chloro-4-nitrobenzene 53906-84-6, 4-Bromo-3,5-dimethylnitrobenzene 77337-82-7,  
 1-Bromo-2-methoxy-4-nitrobenzene 107819-90-9 193361-76-1,  
 2,5-Bis(tributylstannyl)furan  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

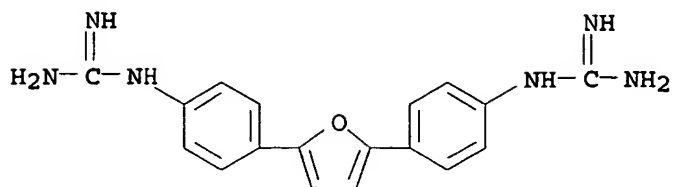
IT 53715-17-6P 56297-30-4P 251577-90-9P 347190-78-7P 347190-79-8P  
 347190-80-1P 347190-81-2P 347190-82-3P 347190-83-4P 347190-84-5P  
 347190-85-6P 347190-86-7P 347190-87-8P 347190-88-9P  
 347190-89-0P 347190-90-3P 347190-91-4P  
 347190-92-5P 347190-99-2P 347191-01-9P  
 347191-02-0P 347191-04-2P 347191-07-5P  
 347191-09-7P 347191-10-0P 347191-12-2P  
 347191-14-4P 347191-16-6P 347191-18-8P  
 347191-20-2P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

IT 100-70-9, 2-Cyanopyridine 1620-77-5, 2-Cyano-5-methylpyridine  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of pyridinethiocarboxamide from (cyano)pyridine and thioacetamide in synthesis of bis(amidinoaryl)furans as antifungicidal and antituberculosis agents)

IT 5346-38-3P, 2-Pyridinecarbothioamide 334017-98-0P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of pyridinethiocarboxamide from (cyano)pyridine and thioacetamide in synthesis of bis(amidinoaryl)furans as antifungicidal and antituberculosis agents)

IT 347190-93-6P 347190-94-7P 347190-95-8P  
 347190-96-9P 347190-97-0P 347190-98-1P  
 347191-00-8P 347191-03-1P 347191-05-3P  
 347191-06-4P 347191-08-6P 347191-11-1P  
 347191-13-3P 347191-15-5P 347191-17-7P  
 347191-19-9P 347191-21-3P  
 RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); BIOL (Biological study); PREP (Preparation)  
 (preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

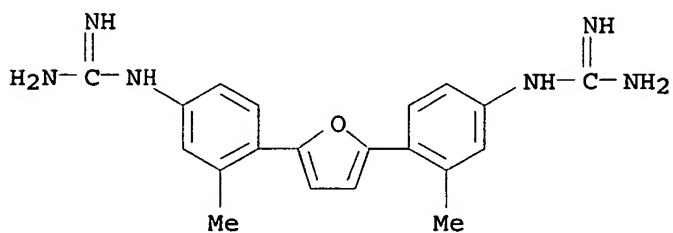
RN 347190-93-6 HCAPLUS  
 CN Guanidine, N,N''''-(2,5-furandiyl)-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-94-7 HCAPLUS

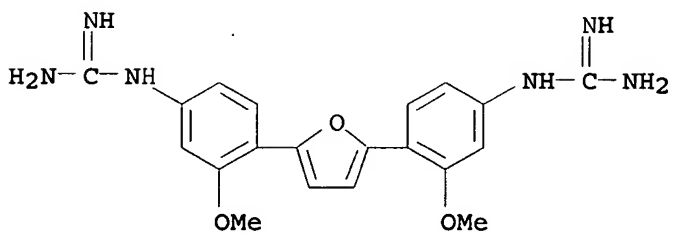
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-95-8 HCAPLUS

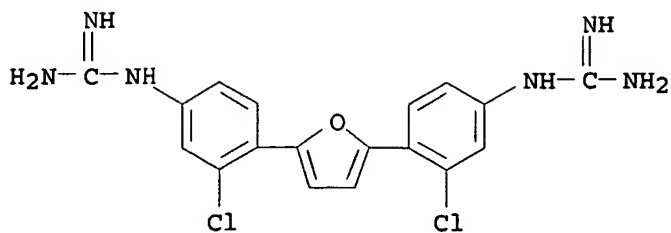
CN Guanidine, N,N'''-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-96-9 HCAPLUS

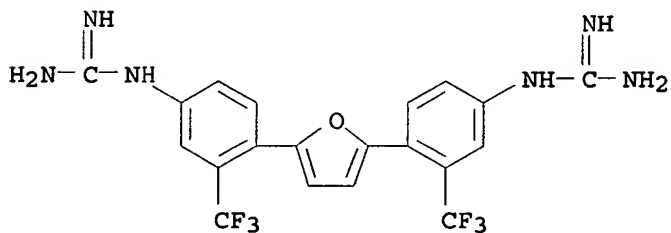
CN Guanidine, N,N'''-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-97-0 HCAPLUS

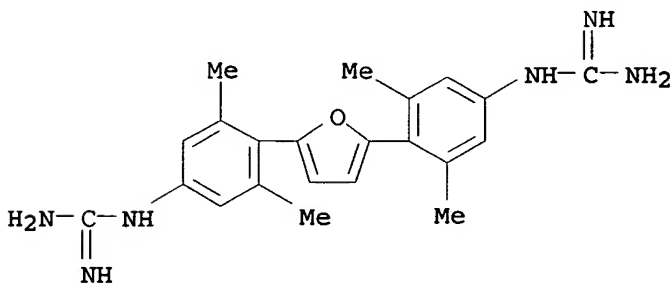
CN Guanidine, N,N'''-[2,5-furandiylbis[3-(trifluoromethyl)-4,1-phenylene]]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347190-98-1 HCAPLUS

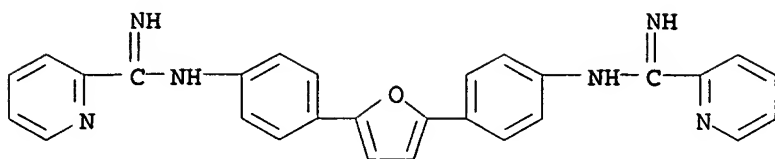
CN Guanidine, N,N'''-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-00-8 HCAPLUS

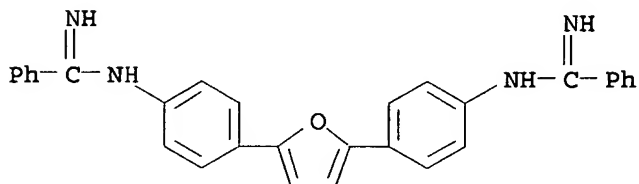
CN 2-Pyridinecarboximidamide, N,N''-(2,5-furandiyl)-4,1-phenylene)bis-, hydrochloride (2:7) (9CI) (CA INDEX NAME)



●7/2 HCl

RN 347191-03-1 HCAPLUS

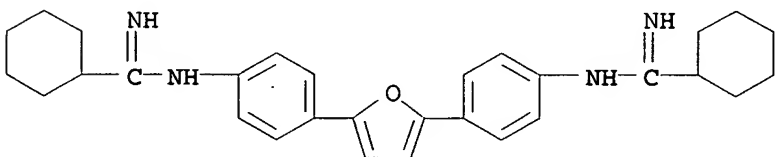
CN Benzenecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-05-3 HCAPLUS

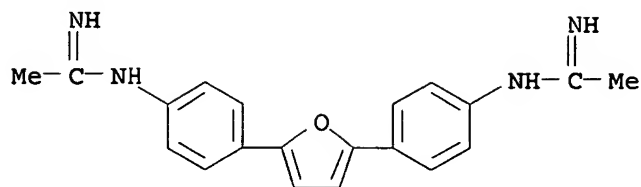
CN Cyclohexanecarboximidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-06-4 HCAPLUS

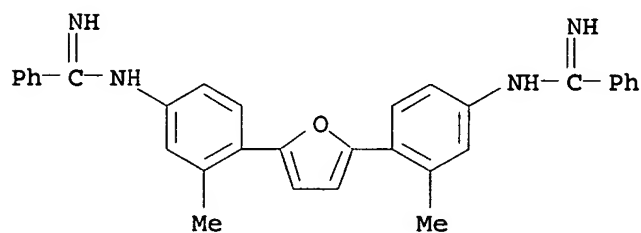
CN Ethanimidamide, N,N'-(2,5-furandiyl-di-4,1-phenylene)bis-, dihydrobromide (9CI) (CA INDEX NAME)



●2 HBr

RN 347191-08-6 HCAPLUS

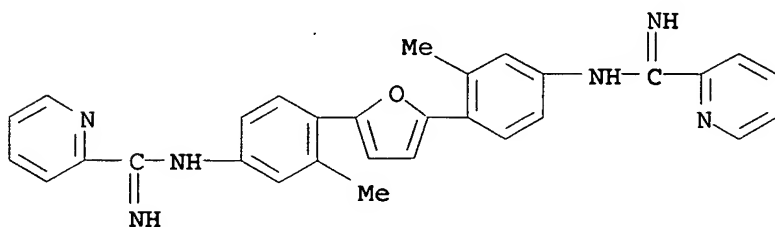
CN Benzenecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-11-1 HCAPLUS

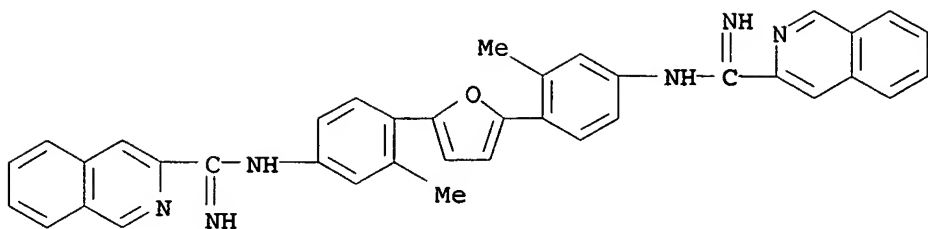
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, hydrochloride (2:7) (9CI) (CA INDEX NAME)



●7/2 HCl

RN 347191-13-3 HCAPLUS

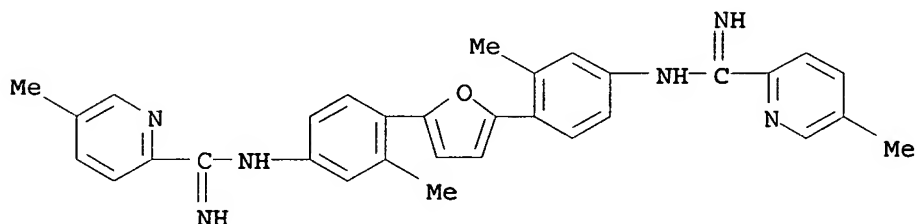
CN 3-Isoquinolinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-15-5 HCAPLUS

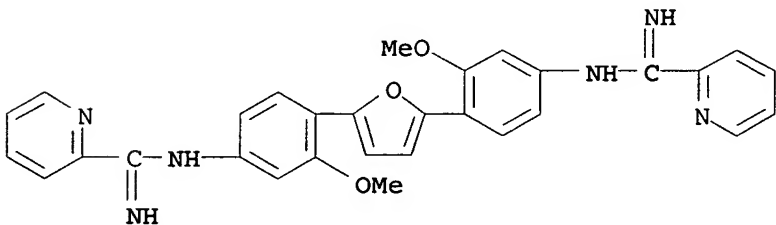
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis[5-methyl-, hydrochloride (4:13) (9CI) (CA INDEX NAME)



●13/4 HCl

RN 347191-17-7 HCAPLUS

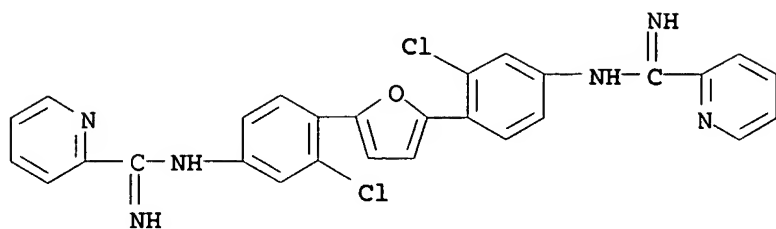
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-19-9 HCAPLUS

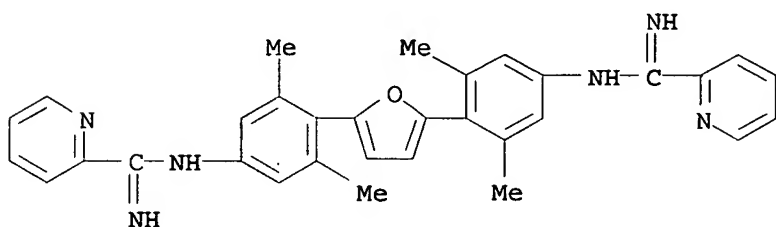
CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis-, dihydrochloride (9CI) (CA INDEX NAME)



●2 HCl

RN 347191-21-3 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis-, hydrochloride (4:15) (9CI) (CA INDEX NAME)



●15/4 HCl

IT 347190-87-8P 347190-88-9P 347190-89-0P  
 347190-90-3P 347190-91-4P 347190-92-5P  
 347190-99-2P 347191-02-0P 347191-04-2P  
 347191-07-5P 347191-09-7P 347191-12-2P  
 347191-14-4P 347191-16-6P 347191-18-8P  
 347191-20-2P

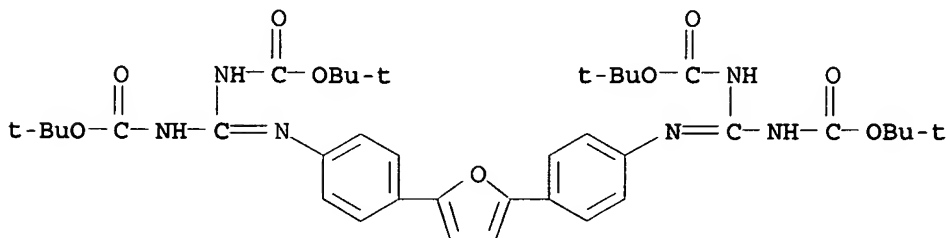
RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(preparation of bis(guanidinoaryl)- and bis(amidinoaryl)furans as antifungal and antituberculosis agents)

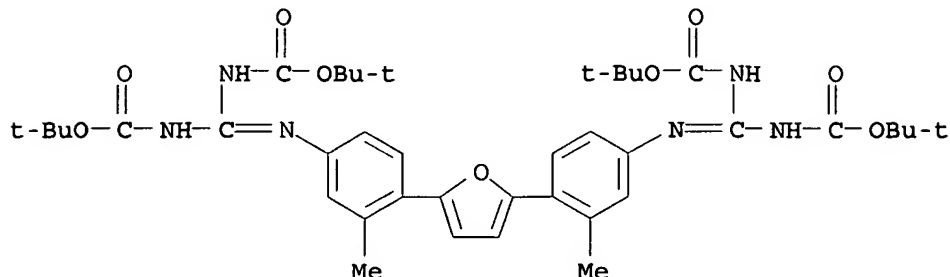
RN 347190-87-8 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis(4,1-phenylenenitrilomethanetetrayl)]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



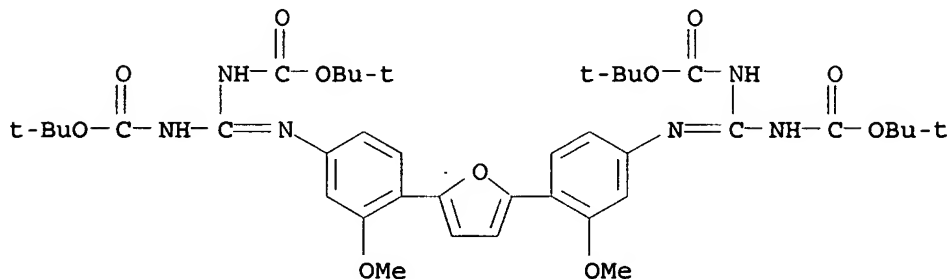
RN 347190-88-9 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-methyl-4,1-phenylene)nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



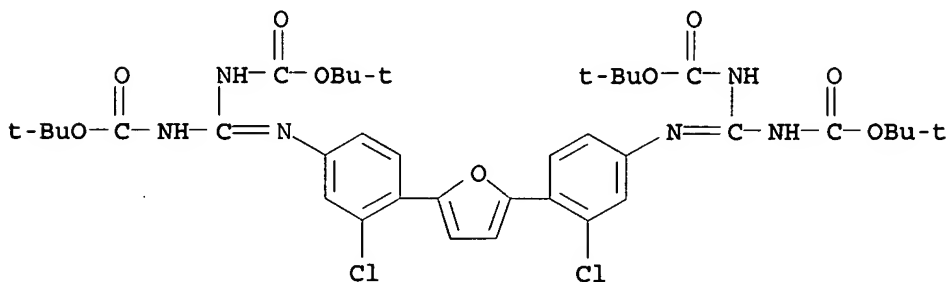
RN 347190-89-0 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-methoxy-4,1-phenylene)nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



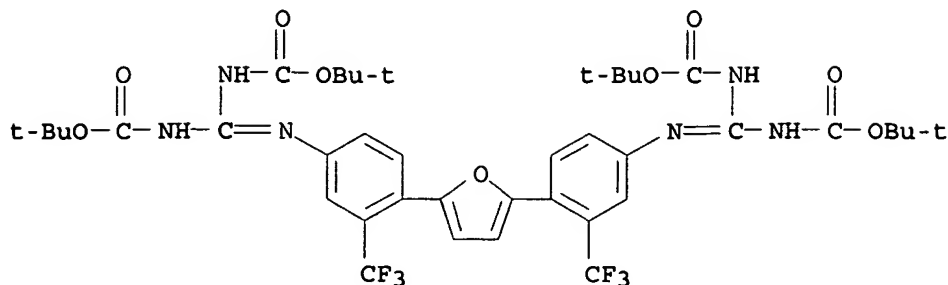
RN 347190-90-3 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3-chloro-4,1-phenylene)nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



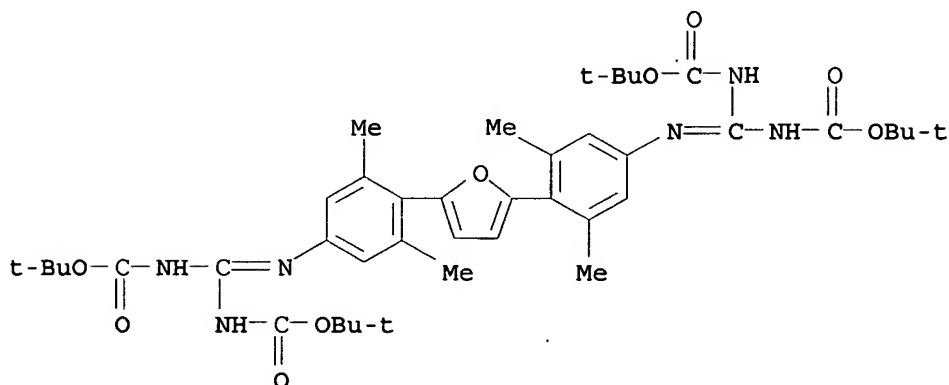
RN 347190-91-4 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[[3-(trifluoromethyl)-4,1-phenylene]nitrilomethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



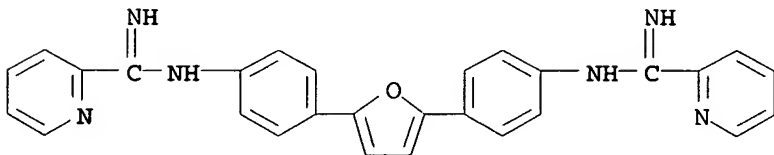
RN 347190-92-5 HCAPLUS

CN Carbamic acid, [2,5-furandiylbis[(3,5-dimethyl-4,1-phenylene)nitrimethanetetrayl]]tetrakis-, tetrakis(1,1-dimethylethyl) ester (9CI) (CA INDEX NAME)



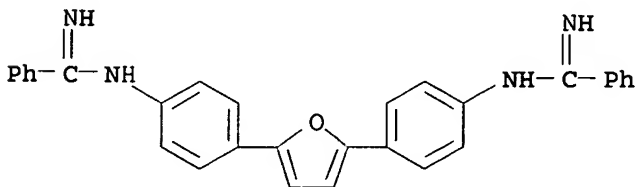
RN 347190-99-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N'-(2,5-furandiyl-4,1-phenylene)bis- (9CI)  
(CA INDEX NAME)

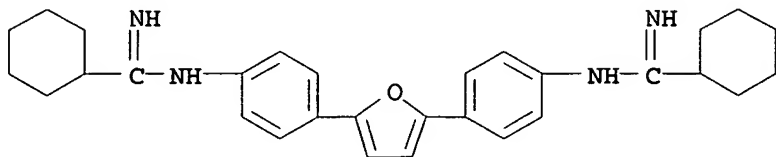


RN 347191-02-0 HCAPLUS

CN Benzenecarboximidamide, N,N'-(2,5-furandiyl-4,1-phenylene)bis- (9CI)  
(CA INDEX NAME)

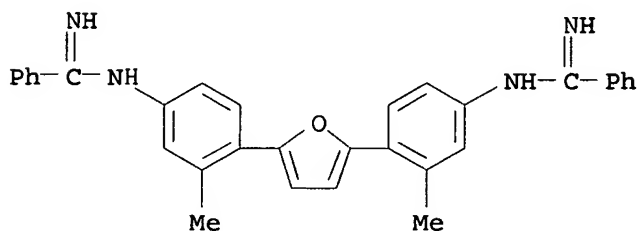


RN 347191-04-2 HCAPLUS

CN Cyclohexanecarboximidamide, N,N''-(2,5-furandiyl-di-4,1-phenylene)bis-  
(9CI) (CA INDEX NAME)

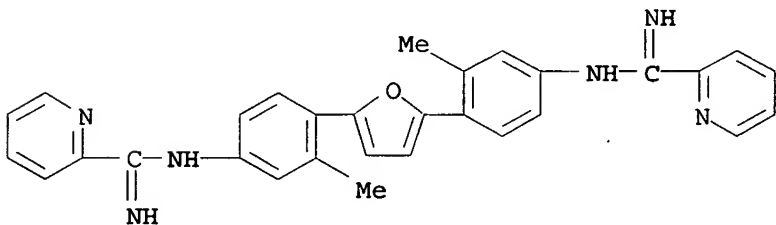
RN 347191-07-5 HCAPLUS

CN Benzenecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



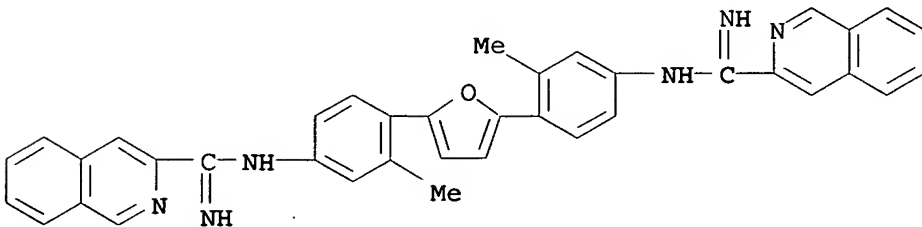
RN 347191-09-7 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



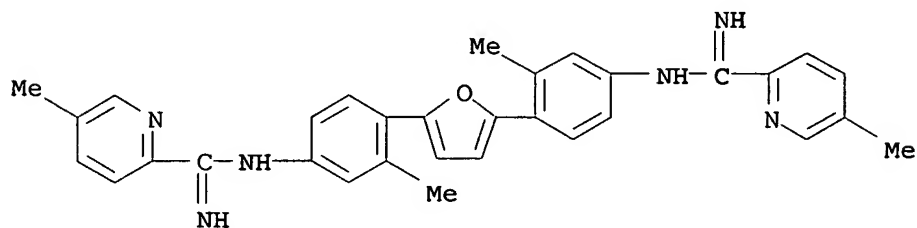
RN 347191-12-2 HCAPLUS

CN 3-Isoquinolinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



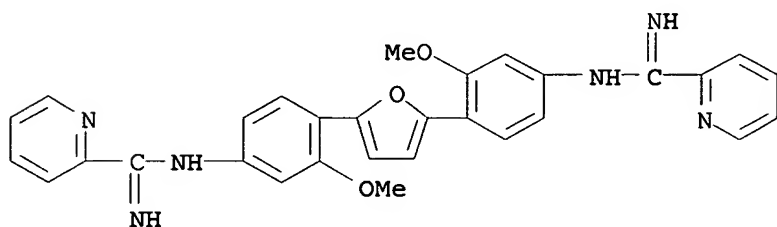
RN 347191-14-4 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



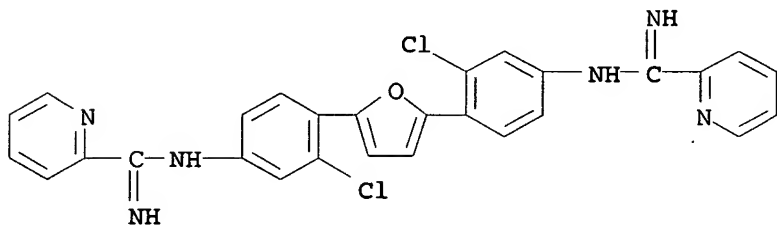
RN 347191-16-6 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-methoxy-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



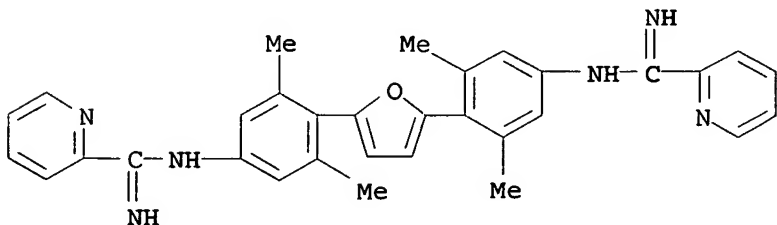
RN 347191-18-8 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3-chloro-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RN 347191-20-2 HCAPLUS

CN 2-Pyridinecarboximidamide, N,N''-[2,5-furandiylbis(3,5-dimethyl-4,1-phenylene)]bis- (9CI) (CA INDEX NAME)



RE.CNT 49 THERE ARE 49 CITED REFERENCES AVAILABLE FOR THIS RECORD

ALL CITATIONS AVAILABLE IN THE RE FORMAT

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